

Security

Products Catalogue



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ATOS SPAIN, S.A.

C/ Ronda de Europa, 5
28760 - Tres Cantos
Madrid
Telf. 91 214 88 00

www.atos.net

Fingerprint development booths

■ DESCRIPTION

We have experience in the installation and maintenance of cyanoacrylate booths of different sizes and manufacturers, in order to find the booths that best fits the client's needs.

■ APPLICATION

Supply, installation and maintenance of cyanoacrylate booths that allow the development of fingerprints for use by the State Security Forces.

USERS:

National Police, Civil Guard

Sigescom

■ DESCRIPTION

The SIGESCOM integrated communication management system, allows the operator to streamline his work as it is possible to use the same computer and software for telephone communications, radio communications, messages by PA system, SMS to a default user or to all users in a given geographical area, fax, etc.

SIGESCOM includes an optional GIS functionality that displays on screen the location of incidents and the mobile units of the customer, on a map of the area, helping the operator to coordinate the actions to perform more effectively.

It also includes a specific module on Emergency Plans for Dams, to automate their management.

■ APPLICATION

Managing communications in critical environments of Defense or Emergency to resolve incidents as expeditiously and efficiently as possible, optimizing and coordinating all available resources.

USERS:

Security Forces, Rescue and Emergency, Dam Owners (Hydrographic Confederations, Electricity Companies, Water Companies, etc.)



Vigía

■ DESCRIPTION

A comprehensive system for maritime border control and maritime traffic management that enables operators to manage all necessary subsystems in such a station from a single operator workstation and through a single software.

The system includes control of cameras and their visualization on the screen of the operator, display of the coverage area with merged information from different detection systems (radar, AIS), integrated communications in one terminal (telephone and radio communications) and seamlessly includes the Centinela software of Atos that manages and integrates security cameras, access control, anti-intruder system and fire prevention system.

■ APPLICATION

Comprehensive system for maritime border control and maritime traffic management.

USERS:

Civil Guard, Sasemar, EMACON, Frontex, DCCG (Dutch Caribbean Coast Guard)

Centinela

■ DESCRIPTION

Centinela is a security system that includes CCTV, intrusion, fire-fighting and access control, giving the customer a SW layer so that operators can use the four subsystems from a single software interface. From the same PC and with a single software, the operator can control the cameras, access, check intrusion and fire alarms, etc.

By integrating the subsystems, Centinela allows them to interconnect with each other.

This allows configuring automatic actions in certain subsystems in response to alarms detected by a different subsystem, for example, to point a security camera to an area where an intrusion alarm has been tripped. These automatic actions facilitate the work of the operator and significantly reduce reaction time to alarms.

■ APPLICATION

Offering our customers a tool that integrates and manages all different security subsystems.

■ NON-ECONOMIC BENEFITS

Greater simplicity of operation and improved incident response.

USERS:

Civil Guard

Mobile Maritime Surveillance Units

■ DESCRIPTION

Mobile Unit for Maritime Traffic Surveillance and/or Control. 4WD off-road truck that allows access to difficult areas. It includes radar and optronic sensors, managed by the Vigía system. The comprehensive system for maritime border control and maritime traffic management enables operators to manage all necessary subsystems in a station from a single operator station and through a single software.



The system includes control of cameras and their visualization on the screen of the operator, display of the coverage area with merged information from different detection systems (radar, AIS), integrated communications in one terminal (telephone and radio communications) and seamlessly includes the Centinela software of Atos that manages and integrates security cameras, access control, anti-intruder system and a fire prevention system.

It allows the connection of multiple units for mobile command centers to receive satellite and/or 3G information.

■ APPLICATION

Comprehensive system for maritime border control and maritime traffic management.

USERS:

Civil Guard



Mobile Satellite Communications Units

■ DESCRIPTION

The Mobile Satellite Communications Unit enables communications through different satellites. It includes a system for receiving images from helicopters. It communicates with portable video cameras that allow local recordings of the desired events. It includes a video editing system.

■ APPLICATION

Flexible and tactical communications system.

USERS:

Civil Guard

GEMMA (Global Emergency Management by Atos)

■ DESCRIPTION

GEMMA Emergency Management platform coordinates the complex mix of resources and systems that make up emergency response networks and ensures they function as a single platform with standardized processes, optimized decision-making and unhindered information flows.

GEMMA helps emergency management and coordination centers to filter and prioritize incoming calls according to specific criteria, in order to deliver the most appropriate response in each case depending on the nature of the incident and the geographic location. It allows responding both to everyday accidents and large and extraordinary emergencies, and even in routine non-urgent transportation tasks.

■ TECHNICAL CHARACTERISTICS

GEMMA is a modular and extremely configurable and customizable platform that responds to new requirements and best practices for emergency management. GEMMA supports business processes of pre-emergency, post-emergency and the emergency itself, by functionally and evenly integrating the best technologies for management, voice and data communications, geographic location systems, recording systems, IT and security systems, etc. It provides seamless, secure and real-time information transfer.

■ APPLICATION

Atos' GEMMA platform is an end-to-end solution for Emergency Management that optimizes resources, reduces response time and, most importantly, saves lives. It helps emergency services to fulfill its commitment to protect citizens and ensures the safety of the whole society.

■ REQUIREMENTS FOR IMPLEMENTATION



The commissioning of an emergency center based on GEMMA typically requires to have one or more emergency rooms with assistance/supervision/management workstations with one or several monitors, secure, redundant and high available IT systems, and communication systems (telephone, radio, VoIP, Video, LAN/WAN) for receiving emergency notices and communicating with involved resources, which in turn are usually equipped with voice and data communication systems, vehicle positioning, etc.

■ ECONOMIC BENEFITS

We offer turnkey projects within an extremely short time.

We have an emergency team with extensive experience, so we can offer a solution that covers the entire lifecycle of emergency management, from consulting to 24x7 support.

■ NON-ECONOMIC BENEFITS

- It allows responding both to everyday accidents and large and extraordinary emergencies, and even in routine non-urgent transportation tasks.
- Interoperability with different agencies and systems to provide a unified response. High level of integration among all components of the system, ensuring a seamless, secure and real-time information transfer.
- KPI management to help in the continuous improvement of the service provided.

■ IMPLEMENTATION EFFORT

Variable.

■ COST

Variable.

■ DEADLINES

Variable.

■ INTERNATIONAL CREDENTIALS

Among others, Atos has customers in Andorra (SAAS), Italy (CARABINIERI), Switzerland (REGA, POLYALERT) or Turkey (IZMIR), and is a member of the Advisory Committee of the European Emergency Number Association (EENA).

■ NATIONAL CREDENTIALS

Among others, customers of Atos are the 112 Aragon, 112 Castilla-La Mancha and 112 Extremadura centers, SEM S.A., General Directorate of Emergency of the Madrid City Hall, SUMMA112, Fire Department of the Autonomous Region of Madrid, HC-Energia (EDP group).

■ DOCUMENTATION

Global Emergency Management.

USERS:

112, health emergency, fire and rescue, security, civil protection, critical infrastructure, crisis management, etc.



CASSIDIAN SOLUTIONS S.A.U.

C/ San Severo, s/n
Barajas Park Ed. A1
28042 - Madrid
Telf. 91 746 14 40

www.cassidian.com

Mobile, professional, and secure radio solutions (PMR)

■ DESCRIPTION

Secure and professional radio communication systems, especially for public security users (police, firemen, civil protection, etc.), but also for critical industries, such as oil, gas, electricity and transport. Cassidian is the only supplier with solutions including the 3 main PMR technologies recognized by the ETSI: TETRA, TETRAPOL and P25.

We also have a wide range of terminals and accessories, tailored to each user's profile.



■ TECHNICAL CHARACTERISTICS

Compliance with TETRA, TETRAPOL and P25 standards.

■ APPLICATION

Providing innovative communication solutions for critical missions, with the aim of improving safety and conditions of people's lives.

We want to deliver the appropriate tools to our customers from public security, defense, transport and industry, so they are able to access all critical information they need, no matter what happens.

Cassidian is a worldwide leader in PMR systems, having delivered more than 215 networks in 67 countries around the world.

■ INTERNATIONAL CREDENTIALS

- More than 210 networks in 70 countries.

■ NATIONAL CREDENTIALS

- SIRDEE network: National network
- RESCAT: Regional network of Catalonia
- Madrid: Regional network
- COMDES: Regional network (Autonomous Region of Valencia)
- Radiecarm: Regional network (Region of Murcia)
- Navarre: Regional network

USERS:

Public Security, Defense, Transport and Industry.



Cyber Security Solutions Centre

■ DESCRIPTION

Monitor, track and anticipate attacks on computer systems.

- Authentication
- Consulting services (regulatory compliance, security audits, intrusion testing, secure architecture, attacks simulation)
- Operational services (SOC): surveillance of systems security, attack analysis, etc.

■ APPLICATION

Monitor, track and anticipate attacks on computer systems.

Consulting, network securing, computer security plans.

■ INTERNATIONAL CREDENTIALS

France, Germany, UK.

Cymerius

■ DESCRIPTION

Flexible solution, capable of integrating into existing client architectures and connectable to many COTS solutions.

■ APPLICATION

Attack monitoring, detection, centralization and evaluation of security incidents in IS systems.

■ INTERNATIONAL CREDENTIALS

France.

USERS:

Government organizations, large corporations, critical infrastructures

Moseo

■ DESCRIPTION

It is a family of products that provides security in deployed systems.

Protection against data loss, intrusion, illegal access.

■ APPLICATION

Securing infrastructures that are being deployed outside the usual networks. It can operate by itself or as an extension of the existing information system.

■ INTERNATIONAL CREDENTIALS

France.

Solutions for control rooms

■ DESCRIPTION

From the location of the emergency call and fleet management to CAD, our solutions are integrated with GIS (Geographic Information Systems) and backed by a strong local or remote information system, as well as mobile data options.

Cassidian integrates field deployed units with control rooms, using mobile data applications to create awareness of the whole situation.

Deployed units have direct access to the information they need, thus making them faster and more effective when they have to deal with an incident.

Cassidian control rooms are seamlessly integrated with PMR, TETRA, TETRAPOL and P25 digital networks, as well as PMR analog networks, thereby offering operators the ability to communicate with field agents through a single 'click'.

Their excellent security and reliability ensure messages are delivered in any circumstance.

■ APPLICATION

Solutions for control rooms that integrate call processing, emergency notification, incident management, CAD (computer aided dispatch) and management of the crisis center in an emergency.

■ NON-ECONOMIC BENEFITS

- High reliability
- Tailored to your needs
- Easy to use
- Intuitive CAD system
- Comprehensive solutions for public security, together with PMR communication networks
- Security throughout the entire cycle, from citizen and field operator to control operator.

It enables:

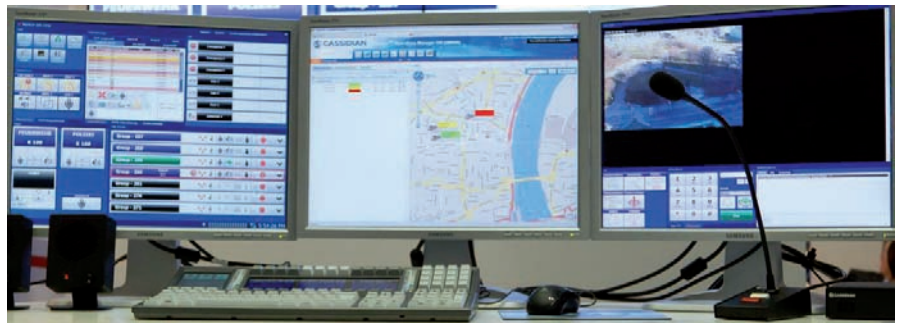
- Comprehensive understanding of the situation
- Rapid reaction
- Efficient operations
- Empowerment of field work

■ INTERNATIONAL CREDENTIALS

Cassidian has installed more than 3,000 control rooms, with sizes ranging from 2 operators to more than 1,200 operators, giving coverage to more than 300 million citizens around the world.

USERS:

Mainly Public Security users





EADS CASA - CASSIDIAN

Paseo de John Lennon, 2
28906 - Getafe
Madrid
Telf. 91 624 31 76

www.cassidian.com

Atlante

■ DESCRIPTION

ATLANTE is a tactical multi-mission unmanned aerial vehicle, with the following capabilities:

- Automatic launch and collection from prepared and unprepared tracks, or catapult launch and parafoil kite collection (additionally has an emergency parachute)
- Operation in most weather conditions
- EO/IR sensors. Optionally, a SAR or maritime radar can be integrated. Other elements (for environmental measurement, releases of special loads, such as medicine, food, etc.) can be installed in the wing hard points.
- Capacity to act as a communications repeater
- Secure communications dual system
- RVT (Remote Video Terminal) capacity
- Autonomous navigation
- Certified to operate in restricted airspace on sparsely populated towns

■ TECHNICAL CHARACTERISTICS

- Wingspan: 8.00 m
- Length: 5.47 m
- Height: 1.99 m
- MTOW: 570 kg
- MPL: up to 100kg, inc: EO/IR
- Autonomy: 14 hrs (24/7 with overlap between aerial vehicles on the theater of operations)
- Maximum altitude: 20,000 ft
- Range: 250 km (LOS); >250 km (BLOS with air relay or hand-over capability between ground stations)
- Electric generator: 4kW
- High-capacity data processing

■ APPLICATION

- Prevention of terrorism and piracy actions
- Border surveillance to prevent illegal immigration, drug trafficking, etc.
- Providing situational awareness for civil protection organizations on the occasion of natural disasters, including search and rescue



- Infrastructure and critical events surveillance (pipelines, power grids, telephone lines, sporting events, etc.)
- Collect intelligence data and give support to ground forces in missions of:
 - Reconnaissance, surveillance and target acquisition
 - Assessment of damages
 - Adjustment of artillery fire
 - Protection of convoys and troops
 - Recognition of guerrillas

■ DEADLINES

Under development.

USERS:

Armies, Civil Guard, Border Control
Agencies, Police, Civil Protection and other civilian users

Tracker

■ DESCRIPTION

- Mini UAV, fixed-wing electric twin engine
- Payload: EO/IR
- Capability to record all data (telemetry and images)
- Geo-referenced snapshots
- 3D Mapping

■ APPLICATION

- Increase security of land forces
- ISR missions

■ TECHNICAL CHARACTERISTICS

- MTOW: 8.5 kg (aerial vehicle)
- Wingspan: 3.60 m
- Speed: Between 60 - 100 km/hr.
- Autonomy: 90 min
- Range: 10 km (optionally expandable up to 20 km)
- Operational height: 500 m
- Maximum height: 3000 m
- Wind resistance: 15 m/s

■ INTERNATIONAL CREDENTIALS

- French Army

USERS:

Armies, Police, Civil Protection

Tanan 300

■ DESCRIPTION

- Rotary wing vertical take-off UAV
- 90HP diesel engine
- HD image
- Permanent EO/IR surveillance

■ TECHNICAL CHARACTERISTICS

- MTOW: 300 kg
- MPL: 50 kg
- Autonomy: 8 h
- Range: 180 km
- Cruising speed: 100 km/hr.

■ APPLICATION

ISTAR missions for Army, Navy, Police or Civil Protection.

■ DEADLINES

Under development.

USERS:

Army, Police, Civil Protection and other civilian users

COPTER (models 1B and 4)

■ DESCRIPTION

Rotary wing unmanned aerial system.

■ TECHNICAL CHARACTERISTICS

- MTOW: 15 kg (1B) – 25 kg (4)
- Length: 2 m
- Payload: 5 kg (1B) – 10 kg (4)
- Height: 1500 m
- Autonomy: 45 min (1B) – 60 min (4)
- Range: 5 km (1B) – 8 km (4)

■ APPLICATION

- Detection, recognition and identification
- Fight against terrorism in urban and rural areas
- Agricultural and maritime applications
- Air surveillance
- Support for police missions
- Support for emergency operations and humanitarian aid

Multi-UAV Ground Control Station

■ DESCRIPTION

It consists of a set of operating consoles that are integrated in a modular fashion, allowing command and control of different types of unmanned aircraft.

Consoles can be installed in a shelter meeting military standards or other office-type environments.

The system has a modular and redundant architecture together with SW DO-178B certification level C, allowing its certification by aviation authorities.

The Cassidian Multi-UAV Ground Control Station is equipped with STANAG 4586 and is therefore interoperable with other platforms.

The architecture is expressly designed for the integration of command and control modules for the different payloads that can be installed in the air segment of the system.

■ TECHNICAL CHARACTERISTICS

- STANAG 4586
- SW DO-178B C
- DDS-based communications
- CARMENTA-based Geographical Information System - full compatibility with virtually all cartographic formats
- Redundant architecture
- Interchangeable consoles
- Flexible installation, both in military Shelters and office environments
- Connection with top-level Command and Control networks

■ APPLICATION

Command and Control of multiple unmanned aircraft, from mini-UAS to MALE UAS, with a single interoperable Control Station.

With this modular and open architecture product, Cassidian is able to provide Ground Control Stations for multiple types of unmanned aircraft, with minor modifications, and facilitating the integration of modules from different customers or partners.

■ ECONOMIC BENEFITS

A single station for multiple aircraft and unmanned systems. The same system can be used as first-level command and control deployable element for forces in the theatre of operations.

■ DEADLINES

Available.

■ INTERNATIONAL CREDENTIALS

- nEUROn Program - Multi-UAV Ground
- Control Station for NEURON
- TALARION Program
- BARRACUDA Program

■ NATIONAL CREDENTIALS

ATLANTE Program.

■ DOCUMENTATION

Complete design documentation.

USERS:

Army and Security Forces operating aircraft and unmanned systems

Self-Protection Suite Airborne Missile Protection System

■ DESCRIPTION

Missile warning and countermeasure system. Protection against IR missiles. Applicable to VIP aircraft, police aircraft, coastal surveillance.

■ APPLICATION

Anti-MANPAD defense in airplanes and helicopters.

■ INTERNATIONAL CREDENTIALS

In Blackhawk, a/c VIP EC145 / 155 / Mi171 / Mi8, Cessna 208.

Sigint Solutions

■ DESCRIPTION

Several systems:

- SCS300: COMINT, to identify, monitor and control hostile communications in HF Band
- SCM 5000: Id, in VHF/UHF Band
- TLM5000: Trunk Line Monitoring System, to intercept, analyze and evaluate mobile communications
- ESM CMM7050: For mobile and flexible applications

■ APPLICATION

Countermeasure systems for use in citizen protection tasks.

■ INTERNATIONAL CREDENTIALS

Police of Saxony (Germany).

Critical infrastructure protection

■ DESCRIPTION

Integrated solutions to protect critical infrastructures. Design, installation and maintenance of the security system. It can be an integral service (including security guards and financing).

Solutions depend on the characteristics of the infrastructure. They typically integrate signals from multiple sources: CCTV, access control, alarm systems, sensors (seismic, HF, MW, etc.), motion detectors, doors, radars, and communications.

■ TECHNICAL CHARACTERISTICS

Ad hoc solutions.

■ APPLICATION

Security of critical infrastructures and facilities.

■ INTERNATIONAL CREDENTIALS

Germany (more than 30 military facilities), TangerMed.

■ NATIONAL CREDENTIALS

Airbus plant in Seville.

Spexer Family

■ DESCRIPTION

- Radar for surveillance of large areas
- Tracking and automatic classification of multiple traces
- Multitasking capabilities
- Clutter suppression

■ TECHNICAL CHARACTERISTICS

- Active Electronically Scanned Array (AESA)
- Digital Beam Forming (DBF)

■ APPLICATION

- Ground surveillance radars:
 - SPEXER 2000, for border surveillance
 - SPEXER 2000 Coast, for maritime surveillance
 - SPEXER 1500, for border and large perimeters surveillance
 - SPEXER 1000, for camps, perimeters and infrastructures surveillance
 - SPEXER 10, for small perimeters and infrastructures surveillance

Border protection

■ DESCRIPTION

- Solutions to protect large areas, including:
 - Sensor network (Irm CCTV, radar, etc.)
 - ISR with capability to collect, add and evaluate data from various incidents

- Secure voice and data communications network
- SW to help in decision making
- Integrated C2

■ APPLICATION

Solutions for securing borders.

■ INTERNATIONAL CREDENTIALS

Romania, Qatar, Saudi Arabia.

Coastal Surveillance Systems

■ DESCRIPTION

- Maritime surveillance.
- Detection of any penetration attempt by sea (illegal immigration, smuggling).

■ TECHNICAL CHARACTERISTICS

- Simultaneous track of multiple traces (including small boats)
- Optimum and thermal day/night cameras
- SW to help in decision making
- Control centers in different layers
- Sharing of information with the different authorities involved
- Integrating maritime and aerial images
- Full filing

■ APPLICATION

- Maritime surveillance.
- Allows detecting, tracking and identifying vessels.

■ INTERNATIONAL CREDENTIALS

France, Qatar, Canada, Portugal.

■ NATIONAL CREDENTIALS

Spain.

Vessel Traffic Services Systems

■ DESCRIPTION

- SW and HW set that includes:
 - Radars
 - AIS stations
 - Radio Direction Finders
 - Optical and IR cameras
- Signalis SW manages the sensor network and can link to historical databases with information on the ships.

■ TECHNICAL CHARACTERISTICS

- Additional modules:
 - VoIP
 - Ship database
 - Support in decision making
 - Secure web access
 - Exchange of information with other systems

■ APPLICATION

It allows operators having a global vision of their area of interest, with surveillance and interaction in critical situations, and with the possibility to quickly communicate any incident to the relevant authorities.

■ INTERNATIONAL CREDENTIALS

Le Havre (Fr), Hamburg (Ge), Portsmouth (UK), Harwich (UK), Riga (Latvia), Bombay (India).

■ NATIONAL CREDENTIALS

Barcelona, Algeciras.

Transhospital

■ DESCRIPTION

- Medical standards equivalent to those of a stationary hospital
- Autonomous system
- Modular, customizable and extendable by using ISO shelters
- Independent, light and quick to install shelters

■ APPLICATION

Mobile hospital, including rescue modules.

Biodesys

■ DESCRIPTION

Monitors CBRN contamination risk in a given region. It can be rapidly transported and is easy to install in the area of operation.

Including:

- Network of remotely controlled sensors
- Transportable CBRN command post for situational awareness
- Transportable shelter-laboratory for analysis and categorization of samples

■ APPLICATION

CBRN threat detection and alert system.

■ INTERNATIONAL CREDENTIALS

French Army.

Friendly Force Tracking

■ DESCRIPTION

Consisting of various items:

- Communications system combining different transmission means through an automatic manager (PMR, Satcom, Tactical Radios, COTS, Wimax, etc.)
- IMPACT-based information system using several solutions: PCs HQ, tablets in vehicles, PDAs for people
- Secure communications

■ APPLICATION

Tracking of vehicles, exchanging messages and managing a common operational picture of friendly forces.

■ INTERNATIONAL CREDENTIALS

NATO, French Army, Saudi Arabia.

System Design Centre

■ DESCRIPTION

SW for engineering services and experimental laboratories, offering a simulation environment in which real systems can be integrated, and allowing demonstrations, risk analysis, and development trade-off of systems and solutions.

■ TECHNICAL CHARACTERISTICS

It includes a large presentation room for simulated scenarios, and a network that allows installing simulated modules and any actual system to interact by using appropriate simulation engines.

■ APPLICATION

- Operational analysis
- Development of operational concepts through the development of simulation models and recreation in virtual scenarios
- Studies of operations
- Conceptual design and experimentation (CD&E)

■ INTERNATIONAL CREDENTIALS

France, Germany, UK.

■ NATIONAL CREDENTIALS

Spain. Viewing room in Getafe.



DEIMOS SPACE S.L.U

C/ Ronda de Poniente 19 Edif. Fiteni VI, portal 2, 2º
28760 - Tres Cantos
Madrid
Telf. 91 806 34 50

www.elecnor-deimos.com

Mobile System for Police Vehicles

- **DESCRIPTION:**
Software and communication technologies in the service of police patrols.
- **TECHNICAL CHARACTERISTICS**
Ability to receive, analyze and transmit data in safe mode.
- **APPLICATION**
Implementation of intelligent items for identification and policing in mobile devices (vehicles).
- **REQUIREMENTS FOR IMPLEMENTATION**
Existence of communications networks.
- **IMPLEMENTATION EFFORT**
Currently under development.
- **DEADLINES**
3-6 months.
- **NATIONAL CREDENTIALS**
Under development in collaboration with Security Forces.

USERS:

Potentially Security Forces

KYROS 1

- **DESCRIPTION**
Location of vehicles, objects, cargo and people, using different technological means based on location and georeferencing.
- **TECHNICAL CHARACTERISTICS**
Software developed by DEIMOS SPACE and proprietary hardware.
- **APPLICATION**
Location of vehicles, objects, cargo and people.



- **REQUIREMENTS FOR IMPLEMENTATION**
Communications network as a base for implementation.
- **IMPLEMENTATION EFFORT**
Currently implemented.
- **COST**
Variable according to number of units (for example: for 300 units, €950/unit).
- **DEADLINES**
Immediate delivery.
- **INTERNATIONAL CREDENTIALS**
Bogota Public Transportation.
- **NATIONAL CREDENTIALS**
National Security Companies.
- **DOCUMENTATION**
Available upon request.

USERS:

National and International Market

KYROS 2

- **DESCRIPTION**
Vehicle fleet location by triangulation.
- **TECHNICAL CHARACTERISTICS**
Software developed by DEIMOS SPACE and proprietary hardware.
- **APPLICATION**
Fleet control.

- **REQUIREMENTS FOR IMPLEMENTATION**
Communications network for its implementation.
- **IMPLEMENTATION EFFORT**
Currently implemented.
- **DEADLINES**
Immediate.
- **NATIONAL CREDENTIALS**
National Security Companies.
- **DOCUMENTATION**
Available upon request.

USERS:

National and International Market

License Plate Reader System OCR

■ DESCRIPTION

Capturing a vehicle's license plate through software and integration into a database for analysis.

■ TECHNICAL CHARACTERISTICS

Integration of different items of the CCTV and DEIMOS SPACE development software.

■ APPLICATION

License plate reading and access control (traffic calming).

■ REQUIREMENTS FOR IMPLEMENTATION

Own means.

■ NON-ECONOMIC BENEFITS

Important synergies and regulation compliance in this regard.

■ IMPLEMENTATION EFFORT

Currently implemented.

■ COST

Variable depending on the number.

■ DEADLINES

Immediate.

■ NATIONAL CREDENTIALS

Different municipalities, corporate companies and supermarkets.

USERS:

Municipalities, supermarkets and car parks

Information Management Platform

■ DESCRIPTION

Uptake from different information sources using a search platform with further analysis and correlation to help decision making.

■ TECHNICAL CHARACTERISTICS

Development of intelligent analysis and management software.

■ APPLICATION

Open source search engine.

■ REQUISITOS PARA SU IMPLANTACIÓN

Databases and analysis.

■ IMPLEMENTATION EFFORT

Under development.

■ DEADLINES

6-9 months.

USERS:

Wide range

Operator Plan

■ DESCRIPTION

Procedures Manual to develop the Operator Plan.

■ TECHNICAL CHARACTERISTICS

Consulting and integration in a management platform.

■ APPLICATION

Compliance and consulting for implementation of the Critical Infrastructure Protection Act.

■ NON-ECONOMIC BENEFITS

Regulatory Compliance and Contingency Plan.

■ COST

According to company size.

■ DEADLINES

3-6 months.

■ NATIONAL CREDENTIALS:

Implementation Phase in Gas Natural Fenosa.

USERS:

Gas Natural Fenosa in implementation phase

Command and Control Workstation

■ DESCRIPTION

Obtaining data and indicators through platform for analysis, integration and presentation.

■ TECHNICAL CHARACTERISTICS

Development of integration software and unitary sensors.

■ APPLICATION

Engineering and integration of different databases in a control room with subsequent presentation.

■ REQUIREMENTS FOR IMPLEMENTATION

Immediate.

■ ECONOMIC BENEFITS

Depending on solution.

■ IMPLEMENTATION EFFORT

According to installation and turnover.

■ DEADLINES

3-6 months.

■ INTERNATIONAL CREDENTIALS

Different solutions in wind farms in Latin America.

■ NATIONAL CREDENTIALS

Different solutions in national wind farms.

USERS:

Electricity/Wind sector

Sticky Bomb Detection (SBD)

■ DESCRIPTION

Expace provides a system consisting of three modules that make up the overall system:

1. PRESSURE SENSITIVE CABLE SYSTEM

- Thin and pressure-sensitive cable, strategically located in the underbody of the vehicle which allows discovering any kind of pressure exerted on the housing
- It detects objects attached under the car in any way, regardless of the material
- The cable sensitivity allows creating a network, keeping a distance between cables of between 5 and 10 cm, depending on the material of the underbody
- Possibility to paint and adapt the cable to uneven surfaces, perfectly camouflaging it in the underbody
- Warns the driver of any incidents when he returns to the car (RFID connection)

2. NIGHT VISION SYSTEM FOR MOTION DETECTION

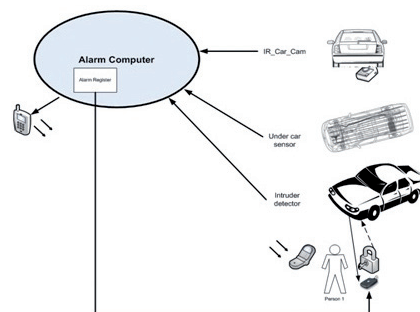
- Night vision system able to detect foreign materials in the car underbody
- Detection of any element affecting the outside of the vehicle (floor, sides) and getting into the inside of the vehicle (underbody, engine block or wheels)
- Camera with infrared filter that makes it invariant to sudden changes in illumination and fully functional in unlit places (garages, malls, etc.) and in the evening
- Image recognition algorithm and environment analysis to optimize capture speed versus system consumption
- Alerts to the user by delivering images on the mobile phone (built-in GPRS/3G connection)

3. REMOTE CAR DOOR OPENING RECOGNITION SYSTEM

- Identification system based on a radio frequency signal attached to the car

key, containing a code that varies every time the car is closed. When the driver returns to the vehicle and open it from his remote radio control, this checks that the system key is the one sent when leaving the vehicle

- Compatible with different users of the vehicle
- Detection of car opening by unauthorized persons and alerting the driver when returning to the vehicle (RFID connection)



■ APPLICATION

Innovative and robust solution for detection of foreign objects in the bottom of the vehicle. This multi-sensor system consists of several devices based on three different technologies, interconnected and operated by a CPU, so that false negatives are minimized.

■ NON-ECONOMIC BENEFITS

Expace solution is an innovative, robust, secure and highly-reliable solution. It detects any object installed in the underbody of the car and minimizes false positives generated in other detection systems.

USERS:

Administration, Armed Forces, State Security Forces, Private Security Companies

Unmanned Reconnaissance Aerial Device (DRA-UAV)

■ DESCRIPTION

DRA-UAV looks like the most widespread bird of the territory, with the same flight characteristics, especially the ability to glide with the engine off, making it completely undetectable for intelligence, surveillance and reconnaissance (ISR) tasks.

Its high gliding capacity with the engine off makes it undetectable in particularly sensitive missions.

This device is especially useful to shoot gregarious birds at civil and military airfields (it is an effective tool for the BASH problem - Bird/Wildlife Aircraft Strike Hazard) or for intelligence, surveillance and reconnaissance tasks in critical infrastructures, as well as for police fight against terrorism and drug trafficking in inaccessible territories.

DRA-UAV can be easily operated by personnel with no aviation experience and minimal training.

The equipment operates in any topographical, atmospheric and environmental conditions.

■ TECHNICAL CHARACTERISTICS

OPERABILITY

- Autonomy: 50 actual minutes of engine cruise flight
- Readiness: 2min
- Interchangeable magnetic connection batteries with "one click"
- Battery charging time: 30min
- Take off: From hand
- Recovery: Ground landing; sea landing; deep loss
- Range: 5-10km. According to weather conditions
- Flight ceiling: According to regulations of the country (over 3,000m)
- Payload: 500gr
- Weather conditions: 30 Knots. Moderate rain
- Main video system:
 - HAD CCD 600TVL camera
 - Day/Night (0.01Lux)
 - Wide Dynamic Range (no Sun dazzle)

- Navigation and control:
 - Inertial stabilization system
 - Waypoint-Guided Navigation
 - Autonomous homecoming in case of signal loss
- Telemetry:
 - Real-time battery status
 - Low battery alarm
 - Engine and systems temperature
 - Overtemperature Alarm
 - Real-time consumption
 - GPS location
 - Speed
 - Distance to base
 - Altimeter-Variometer

SIZE

- Length (unfolded): 85cm
- Wingspan (unfolded): 185cm
- Weight: 2.8Kg ($\pm 100g$ depending on model)
- Carrying case: 86.3 x 60.9 x 31.7cm

MATERIALS

- High-efficiency Brushless motor
- Body + Tail: Composite material of Kevlar-epoxy with high impact resistance
- Two-section main wing: Triple compound of high impact resistance
- 2 Batteries: Lithium-Polymer battery 6000mAh 40C. Rigid casing and automatic connection
- Automatic charger 50W 220v-110v-12v + charging cables
- Radio Link: 433MHz Spread Spectrum
- Video link: 900MHz
- Ground station:
 - Station + batteries: EvoPro. Customized
 - Briefcase solution for real-time video reception
 - Video glasses
- Packing: Waterproof and weatherproof Peli 1730 Case (IP67).



APPLICATION

DRA-micro UAV is an Aerial Reconnaissance Device, unmanned (UAV) and simple to use, designed for silent and discreet aerial surveillance.

ECONOMIC BENEFITS

Despite the measures used today, airlines and armed forces around the world continue losing lives and millions of dollars mainly due to aircraft collisions (taking off and landing) with different types of birds.

DRA-UAV helps prevent collisions, minimizing damage and economic losses suffered because of these incidents. This system is also cheaper and economically more efficient than falconry currently used.

NON-ECONOMIC BENEFITS

For surveillance and reconnaissance work, the DRA-UAV provides an inexpensive tool and prevents exposure of personnel in dangerous missions.

USERS:

Administration, Airports, Ports, Armed Forces, State Security Forces, Private Security Companies

ECM Electronic Cargo Management

DESCRIPTION

ECM is an advanced technology platform that provides greater efficiency and security to freight transport, not only by sea, but intermodal transport. The proposed system consists of several different subsystems that provide information to the platform and help in user decision-making with regard to the events as they occur. It has the following main elements:

- Electronic seal, consisting of a device inside the container, where the battery is located, various sensors, a position locator and a data processing system
- Base station to connect with the device and receive communications
- Communications infrastructure, installed in the vessel and at port, to allow data transfer between a container and a central server
- User interface to remotely operate the system via web
- PDA for device activation and checking
- Comprehensive Control Centre, from where the entire system is managed using cloud computing technologies.

The core element of the ECM is called electronic seal, a low-cost device with sufficient autonomy and equipped with

different sensors and detectors, which is placed inside cargo containers. The device configuration can be customized and varies according to the desired information on the cargo: unauthorized opening of the container, humidity variations, temperature, presence of certain substances, shocks or falls of the container, etc.

Each seal stores different useful information about the cargo contained: registration number of the container, closure data, content, weight, planned route, sensor parameterization, e-manifest, etc.

In addition to seals, the ECM includes a Base Station (BS) consisting of a processing and communications unit, designed to operate according to freight environmental requirements, which serves as interface between the containers and the telecommunications network of the transport where the container is located (ship, train or truck), or between the container and the network of the loading and unloading center (seaport, dry port...).

The seal is fitted with its own wireless communications system, which aims to transmit cargo data to the nearest BS.

The system has a PDA which enables initial activation of the seal and sealing of the container, as well as digitization and electronic processing of documentation associated with the cargo in the container.

The PDA is equipped with its own, simple, intuitive and easy-to-use development software which allows writing and reading the cargo manifest associated to a shipment, as well as checking the data entered in the seal and data resulting from sensor measurements.

Through a defined telecommunications infrastructure, the electronic seal sends data on location and incidents relating to the cargo status.

The user and owner of the goods can consult the data through a web application designed for this purpose. In case of incidents, it is possible to receive alerts via email or SMS on the mobile phone.

TECHNICAL CHARACTERISTICS

System Components:

- Integrated Transportation Center (ITC): Central information system that manages active routes at any given time and in the near future. It receives and processes all inputs related to transport, and distributes the results to each of the parties involved.
- Transportation Policy Provider (TPP):

It provides a formal description of the requirements that transportation resources must comply with for each type of goods, according to the regulations in force.

- Local Planning Center (LPC): Management and control of goods in a specific Operating Environment (port, station or dry port).
- Monitoring Device (MD): Stand-alone electronic device located inside the container, with a set of sensors and a communication interface. It monitors the status and location of goods and sends alarms when unplanned events occur.
- Communications Infrastructure (CI): Allowing interconnection of the different subsystems. Satellite communications through ECM's own resources and the infrastructure of its environment.
- Onboard Station (OS): Interface between MD and inherent CI available in the operating environment (ship, train, truck, cargo center, port).
- Tracking Station (TS): Electronic device, portable or stationary, ready to access the information contained in a MD.
- Sealing Station (SS): Portable electronic device with communication interfaces for MD and ITC. It authorizes the sealing of a MD, and writes and reads the associated cargo manifest, all configuration data and sensor measurements.
- Inspection Station (IS): Portable electronic device for use by law enforcement officers. It checks out the information stored in a MD.
- Stowage Station (STS): Computing device integrated into a hoisting device. Updates the MD of handled containers with information on its location in terms of a Relative Local Positioning System.

■ APPLICATION

Electronic Cargo Management (ECM) is an information model for intelligent management of freight transport. It controls the entire life cycle of a freight transport and plan shipments to ensure efficient global management. ECM considers the variable nature of the environment where the goods are in transit and implements mechanisms to adapt to such environment.

ECM allows knowing the real-time position of cargo containers in transit, without having to wait as they pass through different checkpoints. It also has

a sensor technology to know the status of the cargo at all times. ECM also facilitates secure electronic management of the documentation associated with a shipment.

The development of the ECM responds to a need of the European strategy for innovation in the maritime sector, in regard to the concept of e-Maritime: use of advanced information technologies for working and doing business in the maritime transport sector.



■ NON-ECONOMIC BENEFITS

ECM is an integrated solution that promotes the interactivity between the user and the goods. It simultaneously improves shipment logistics and security, while providing electronic support to facilitate the administrative procedures associated with the shipment of containers.

The implementation of a system for electronic processing of digitized documents, allows all processes of ports, customs, security and others to be conducted in a more orderly, efficient and safe way, and with a significant saving of time.

ECM brings many benefits to the different players in the freight transport:

- Cargo owners:
 - Accurate information in real time on cargo status and location
 - Immediate alert of tampering and adulteration
 - Total interactivity with the cargo and direct and continuous traceability
 - Flexibility of service and adaptability to customer needs
- Shipping Lines:
 - Improved logistics and fleet management
 - Improved service to end users
 - Reduced risk for loss/damage of goods. Impact on the cost of transport insurance

- Port Authorities:

- Efficient and integrated freight transport management from a control center. Efficient use of resources and infrastructures
- Simplified clearance of goods
- Automated and standardized customs and trade procedures
- Improved location of containers at port
- Compliance with future standards for transportation through Motorways of the Sea (MoS) and inland waterways
- Prevention against unlawful acts, through detection of hazardous substances (radioactive, chemicals, explosives...) inside the containers.

USERS:

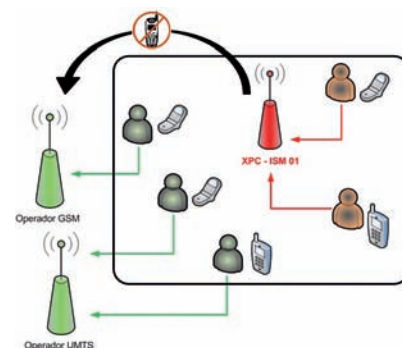
Cargo owners, transport customers, port authorities, insurance companies, transport companies

ISM Mobile Signal Blocker (MSB)

■ DESCRIPTION

Smart control system for mobile network access, capable of preventing unauthorized phone communications and discriminate devices that are not allowed to connect to the business network. Tool to prevent mobile phones smuggled into prisons.

The device simulates a communication cell in the mobile operator's network. Nearby phones are connected to the cell, so apparently they have network coverage. The device only allows establishment of calls from authorized terminals.



■ TECHNICAL CHARACTERISTICS

MSB establishes its own communications network to locate phones present in its area of operation and prevents calls to unauthorized numbers. Authorized phones are redirected to commercial operator's networks and unauthorized phones are blocked.

- Prevents unwanted communications before they occur
- It is not necessary to locate and remove the phone to prevent communications
- Physical devices in restricted access points are scarce
- Valid for GSM and UMTS frequency bands
- 100% Spanish technology, developed to meet user needs

■ APPLICATION

The main objective of the MSB is to distinguish between mobile phones authorized to establish communication and those that are not authorized. Depending on the configuration and relevant authorizations, the system may decide what mobile phones, under its range, can be connected to operator networks, thereby preventing unauthorized terminals to make calls outside the range of action of the MSB.

■ ECONOMIC BENEFITS

Low-cost system with minimal maintenance.

■ NON-ECONOMIC BENEFITS

Enables control of unauthorized people communications within restricted sites.

It will prevent unwanted communications from occurring.

USERS:

Correctional Facilities, Armed Forces, State Security Forces, Private Security Companies

SALSA (by its acronym in Spanish) Automatic Weapon Localization and Tracking System

■ DESCRIPTION

SALSA efficiently uses technologies developed in the civil sphere (RFID, TCP/IP, GPS, and GPRS), integrating them and creating a specific computer application that allows managing authorizations, inventory and alarms.

In general, the system provides weapons with identification tags and readers distributed across the armory that permanently look for the presence of tags in their radio coverage. These signals are transmitted via TCP/IP and information is managed using specially designed software that identifies withdrawal of weapons from the armory, generating alarms in the event of unauthorized use.

■ TECHNICAL CHARACTERISTICS

Key technologies:

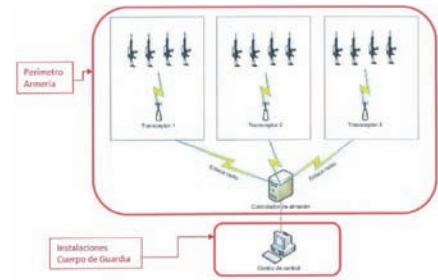
1. Radio Frequency Identification (RFID)
 - Description: Radio frequency identification, RFID, is based on the transfer of information through electromagnetic signals.
 - The basic infrastructure consists of three elements: Reader/writer, antenna and labels/tags
2. TCP/IP communications protocol
 - Description: It is the most widely used communication protocol in the Internet and intranets. It is based on the TCP/IP protocol stack. The protocol can be implemented on cable, wireless or both.

■ APPLICATION

The main objective of SALSA is to support weapon control in custody centers of Ships, Bases and Barracks, providing staff with a working tool for automatic electronic tracking and verification of weapon stocks in the armories. The automation provided by the system speeds

up control performance and enhances accuracy as it records large volume of data (serial numbers) without human errors, ultimately increasing the control security level.

In addition, SALSA is an alarm system for unauthorized movements of weapons. Optionally, it can be extended with a geo-location system.



■ ECONOMIC BENEFITS

Low-cost system with minimal maintenance.

■ NON-ECONOMIC BENEFITS

- SALSA reduces weapon extraction and delivery times at the armories, allowing easier access of staff in the armories.
- SALSA automatically controls a large number of authorizations, increasing accuracy and reducing errors and waiting times.
- SALSA automatically, reliably and accurately records all necessary data.
- SALSA development software provides the necessary information on the degree of detail required for different levels of control.
- Alarms generated by SALSA due to unauthorized weapon movement are completely effective and reliable. If a weapon is out of reader range, the system unquestionably will trigger an alarm. No other consideration would result in the initiation of an alarm. Moreover, the system adds no risk of false alarms and, in turn, it would help

to avoid some of them from currently used security systems.

- One of the great advantages of SALSA is that it is not dependent on the design of the armories. SALSA will work with the same efficiency regardless of the armory layout.
- In line with the previous point, SALSA efficiently locates weapons regardless if they are stored at sight in shelves or in boxes. SALSA also detects weapons regardless of their position or visibility.
- SALSA can represent a value added for location or situation of certain weapons by incorporating an optional follow-up subsystem, which would allow detecting the exact position of a weapon and tracing it.
- Task automation is a helpful tool for responsible personnel, as it reduces human errors. At time of shifts, security would be enhanced.
- SALSA provides commanders a higher confidence in assuming the great responsibility accompanying the custody of weapons.
- With SALSA, inspections will be conducted with full speed and the level of detail desired. This will entail more frequent and complete inspections.
- Improved authorization and registration control of required data will result in a considerable reduction in weapon withdrawal and delivery times.
- It adds the ability to easily and instantly obtain a history of all weapon movements in the armory.
- As it is possible to record all data on the use of weapons and it has development software, the information processing will produce an analysis that will help commanders in decision-making for programming activities and allocating resources.

USERS:

Armed Forces, State Security Forces,
Private Security Companies







EXPAL SYSTEMS, S.A

Avda. del Partenón, 16
28042 - Madrid
Telf. 91 722 02 35

www.expal.biz

Personnel motion control system SICOMP

■ DESCRIPTION

Command and control system that, through human interface, allows a gradual response to any personnel intrusion.

Originally created to replace anti-personnel mines, fulfilling all its missions and in accordance with the international guidelines for armament control (Ottawa Convention). The flexibility to adapt to multiple scenarios enables its integration in carrying out a wide variety of missions.



■ TECHNICAL CHARACTERISTICS

Interconnected and equipped with various types of detectors, the primary sensors are responsible for warning of a possible intrusion. Subsequently, the user can confirm the scope of the warning and even identify the type of aggression through the use of secondary or confirmation/identification sensors. The system integrates diurnal cameras and high-resolution passive infrared, able to focus in the direction where the intrusion has been detected. After evaluating the intrusion, the system operator will make the decision to grade the response from the control unit.



■ APPLICATION

Control of areas against the intrusion of personnel on foot or in vehicles.

■ REQUIREMENTS FOR IMPLEMENTATION

Acquisition and tracking of a training program for system operation.

■ NON-ECONOMIC BENEFITS

Possibility to control an area according to the international regulations for arms control; in this case, limiting use of anti-personnel mines (Ottawa Convention).

■ IMPLEMENTATION EFFORT

N/A.

■ INTERNATIONAL CREDENTIALS

France and Finland are showing interest in the product.

■ NATIONAL CREDENTIALS

Developed under a joint national program for the Directorate General of Armament and Equipment (DGAM).

■ DOCUMENTATION

Program documentation, product specification, commercial/technical specification, product sheet.

USERS:

Armed Forces, Security Forces

Super-Secure Initiation System SIS

■ DESCRIPTION

Two-wire electronic initiation system for explosive charges consisting of exploder and detonators.



■ TECHNICAL CHARACTERISTICS

Electronic exploder of very small size and electronic detonator that has a "digital door" before the pyrotechnic component. Encrypted communication between the two elements prior to the detonation order. The exploder allows simultaneous detonation of up to ten detonators.

■ APPLICATION

Initiation system that allows operators to eliminate all time dedicated to security protocols during the handling of detonators and avoids risks due to static currents or unexpected inductions, which are the main causes of accidents.

■ REQUIREMENTS FOR IMPLEMENTATION

Acquisition and tracking of instructions for operations.

■ NON-ECONOMIC BENEFITS

Substantial improvement in security margins in handling of initiation systems, increased operability and great reduction of laying times for operators.

■ NATIONAL CREDENTIALS

Developed within an internal program of Expal Systems S.A.



■ DOCUMENTATION

Program documentation, product sheet and technical/commercial specifications.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

Instant shock wave tube pyrotechnic detonator DC-2

■ DESCRIPTION

Single-use instant pyrotechnic initiation system by shock wave tube.

■ TECHNICAL CHARACTERISTICS

Pyrotechnic initiation device consisting of a pyrotechnic shock wave tube igniter, of 30, 100 or 300 m. and a pyrotechnic detonator.

■ APPLICATION

Secure, fast, instant and single-use pyrotechnic initiation system for different initiation distances, as an alternative to the use of slow fuse.

■ NON-ECONOMIC BENEFITS

Security, speed and adaptability with a pyrotechnic initiation system that remains unchanged to electrostatic discharges or induced currents.

■ IMPLEMENTATION EFFORT

N/A.

■ NATIONAL CREDENTIALS

The origin of the product is a program internally developed by Expal Systems S.A.

■ DOCUMENTATION

Program documentation, product specification, product sheet and commercial/technical specification.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

Plastic Explosive PG-2 / PG-3

■ DESCRIPTION

Stable and powerful plastic explosive, with low sensitivity to external mechanical actions, non-toxic in contact with skin and able to adapt to any application surface.

■ TECHNICAL CHARACTERISTICS

Hexogen-based plastic explosive in two percentages, 85% for PG-2 and 88.5% for PG-3. As binder, it uses a mixture of polyisobutylenes which confer excellent workability, consistency under water, self-adhesion and stability.

Detonation speeds can range from 7400 m/s for PG-2 to 7800 m/s for PG-3.

■ APPLICATION

Explosive of instant application and adaptability to the application surface.

■ NON-ECONOMIC BENEFITS

High-quality and high-performance explosive that allows a virtually immediate application.



■ DEADLINES

Minimum 2 months depending on the amount requested.

■ INTERNATIONAL CREDENTIALS

Explosive supplied to Armed Forces and Security Forces of Cyprus, Spain, Italy, Lebanon and Portugal. It is also supplied to France, while Netherlands and Belgium show great interest in its characteristics.

■ NATIONAL CREDENTIALS

Plastic explosive used in Spain by Armed Forces and Security Forces.

■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

Plastic Explosive PG-4 / PG-5

■ DESCRIPTION

Stable and powerful plastic explosive, with low sensitivity to external mechanical actions, non-toxic in contact with skin and able to adapt to any application surface.

■ TECHNICAL CHARACTERISTICS

PETN-based plastic explosive in two percentages, 85% for PG-4 and 88.5% for PG-5. As binder, it uses a mixture of polyisobutylenes which confer excellent workability, consistency under water, self-adhesion and stability. Detonation speeds can range from 7000 m/s for PG-4 to 7400 m/s for PG-5.

■ APPLICATION

Explosive of instant application and adaptability to the application surface.

■ NON-ECONOMIC BENEFITS

High-quality and high-performance explosive that allows a virtually immediate application. Unalterable in contact with water.

■ DEADLINES

Minimum 4 months depending on the amount requested.

■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

Ribbon-shaped plastic explosive

■ DESCRIPTION

Flexible and powerful ribbon-shaped plastic explosive, with low sensitivity to external mechanical actions, non-toxic in contact with skin and able to adapt to any application surface. It is easy to cut and attach by one of its faces. Thickness can range from 2 to 6 mm.



■ TECHNICAL CHARACTERISTICS

PETN-based plastic explosive with polyisobutylene binder that give it excellent characteristics of flexibility and consistency under water. It reaches a density of 1.4 g/cm³ and a detonation speed of approximately 7,000 m/s. It maintains all its characteristics when used in temperatures between -30°C and +60°C.

■ APPLICATION

Explosive easily conforming as special charge, rapidly adapting to the application surface.

■ NON-ECONOMIC BENEFITS

High-quality and high-performance explosive that allows a virtually immediate application. Unalterable in contact with water.

■ DEADLINES

Minimum 4 months depending on the amount requested.

■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

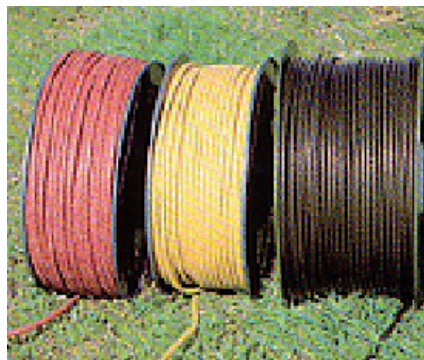
Detonation Cord

■ DESCRIPTION

Family of detonation cords with PETN core charge of different weights and a wide range of tensile strengths.

■ TECHNICAL CHARACTERISTICS

Product manufactured both with standard features and reinforced for use in extreme conditions, where special characteristics of resistance to abrasion or traction are required, with values ranging from 75 to 100 g/cm². Depending on the PETN linear charge (between 3 and 100 g/m), detonation speeds will range between 6,500 and 7,000 m/s.



■ APPLICATION

PETN linear charge used to convey an explosion wave between two or more points synchronizing multiple initiations or acting by itself as explosive charge.

■ DEADLINES

Minimum 4 months depending on the amount requested.

■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

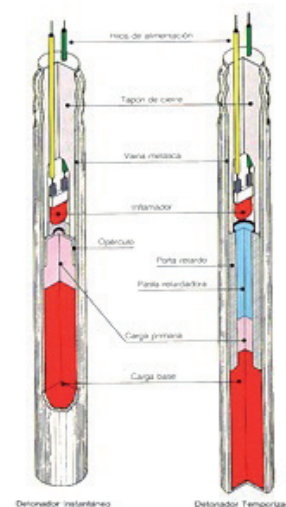
USERS:

Armed Forces, Security Forces, Emergency Units and EOD

Electric Detonators

■ DESCRIPTION

Charge initiation system which makes use of electrical power as operating energy and has a wide range of sensitivities in the initiation current and operation delays.



■ TECHNICAL CHARACTERISTICS

Expal electric detonators are characterized by high reliability. They come in three types of sensitivity:

- "S" type: for places where there is no danger of stray or induced currents or RF
- "I" type: with greater ignition pulse and security current than previous type
- "AI" type: for applications where there may be a risk of accidental ignition.

All are available in delay and micro delay series. For easy identification, the delay period of each detonator is recorded in its pellet, as well as on the identification label.

■ APPLICATION

Charge initiation system allowing the operator to stay at a safe distance.

■ DOCUMENTATION

Program documentation, product sheet and technical/commercial specifications.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

Electric Exploders

■ DESCRIPTION

Maintenance-free exploders that generate discharge by simply operating a crank or a strip-bending. The internal capacitor accumulates energy and automatically releases it to the fire loop.

When the capacitor reaches its maximum load capacity, it immediately releases it ensuring a fast and efficient initiation of electric detonators.

■ TECHNICAL CHARACTERISTICS

- Voltage of capacitor: 380 V ~ 1160 V
- Capacity: 6.8 µF 30 µF



- Weight: 0.3 kg 2 kg
- Size: 135 x 55 x 35 mm
~ 120 x 77 x 155 mm
- Maximum external resistance: A 60 Ω, U 25 Ω. A 810 Ω, 370 Ω VA 60 Ω

■ APPLICATION

Initiation of electric detonators. Solid exploders of reduced weight, size and without the need of power source.

■ BENEFICIOS ECONÓMICOS:

Maintenance-free exploders.

■ NON-ECONOMIC BENEFITS

Rugged exploders, highly reliable in operation.

■ DEADLINES

Minimum 4 months depending on the amount requested.

■ INTERNATIONAL CREDENTIALS

Supplied to many countries. Factory located in Germany.

■ NATIONAL CREDENTIALS

Traditionally supplied to Spain.

■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

Exploder ER-401

■ DESCRIPTION

Exploder capable of simultaneously initiating up to 10 electric detonators. Safety is a priority feature in the design of the ER-401 to avoid any kind of accident by unwanted electrical discharges. Its operation enables instant initiation of detonators or delayed initiation up to 24 hours at 1 minute intervals.

■ TECHNICAL CHARACTERISTICS

- Commercial battery: 9 V
- Weight: 0.6 kg
- Size: 175 x 101 x 36 mm
- Size with antenna: 175 x 101 x 206 mm

■ APPLICATION

Electronic delay exploder with battery for instant initiation of electric detonators or initiation after a set time.

■ NON-ECONOMIC BENEFITS

Rugged exploders, highly reliable in operation.

■ DEADLINES

Minimum 6 months depending on the amount requested.

■ NATIONAL CREDENTIALS

Supplied in Spain to Armed Forces and Security Forces.



■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

Exploder SR-401

■ DESCRIPTION

The SR-401 system consists of a PR-401 programmer/transmitter and one or several (up to 10) receiving modules MR-401. The PR-401 is capable of individually or simultaneously programming, assembling, disabling or initiating 10 MR-401 at a distance of up to 600 m, each one with an electrical output capable of initiating in

turn up to 10 electric detonators connected in series with a line of maximum length of approximately 200 meters. Remotely, the transmitter can program the receivers with instant initiations or delayed initiations up to 24 hours.



■ TECHNICAL CHARACTERISTICS

- Commercial battery for transmitter/receiver: 9 V
- Weight: 0.6 kg
- Size: 175 x 101 x 36 mm
- Size with antenna: 175 x 101 x 206 mm
- Range: 600 m

■ APPLICATION

The SR-401 is a universal electronic system capable of remotely RF controlling the initiation of electric detonators. In its design the security criteria have been prioritized.

■ NON-ECONOMIC BENEFITS

Highly-reliable rugged exploders.

■ DEADLINES

Minimum 6 months depending on the amount requested.

■ NATIONAL CREDENTIALS

Supplied in Spain to Armed Forces and Security Forces.

■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

USERS:

Armed Forces, Security Forces, Emergency Units and EOD

EOD Charge CH 25 EL

■ DESCRIPTION

CH-25 is an EOD charge on service in the Armed Forces and police in Spain and other countries. It is very versatile in its neutralizing capacity and applicable in a wide variety of UXO, being able to achieve low-order results.

It has a highly flexible stand-off, ranging from 22 to 500 mm. It is a very secure cargo for transport. It can be started by electric or pyrotechnic detonators or detonating cord.

■ TECHNICAL CHARACTERISTICS

- Weight: 113.7 gr
- Height: 88 mm
- Height with stand-off system: 22 a 500 mm
- Diameter: 27 mm
- Type of explosive: Composition A-5
- Weight of explosive: 20.5 gr

■ APPLICATION

Small charge that allows neutralization of explosive charges confined in containers, decomposing them by deflagration.

■ NON-ECONOMIC BENEFITS

It turns off ammunition and improvised devices achieving low-order results during neutralization of mines, artillery shells, rockets, mortar shells, hand grenades, explosive charges confined in improvised devices, etc.

■ DEADLINES

Minimum 4 months depending on the amount requested.

■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

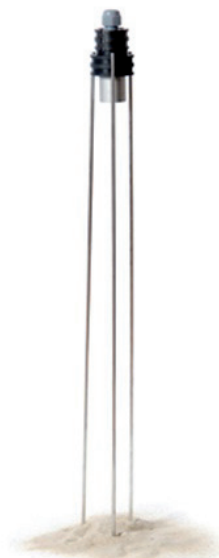
USERS:

EOD Units

EOD Charge CH 40

■ DESCRIPTION

CH-40 is an EOD charge on service in the Armed Forces and police in Spain and other countries. It is a neutralization charge for ammunition or improvised not-exploded devices, causing their detonation on site from a safe distance and without the need to contact the UXO. It is



very versatile, given the number of systems it can be applied to, obtaining high-order results. It can be started by electric or pyrotechnic detonators or detonating cord.

■ TECHNICAL CHARACTERISTICS

- Total weight: 46 gr
- Height: 100 mm
- Diameter: 36 mm
- Type of explosive: Composition A-5
- Weight of explosive 36 gr

■ APPLICATION

Small charge that allows neutralization of explosive charges confined in containers, decomposing them by detonation.

■ NON-ECONOMIC BENEFITS

It turns off ammunition and improvised devices achieving detonation results during neutralization of mines, artillery shells, rockets, mortar shells, hand grenades,

explosive charges confined in improvised devices, etc., without the need to contact the UXO and at a safe distance.

■ DEADLINES

Minimum 4 months depending on the amount requested.

■ DOCUMENTATION

Technical/commercial specifications, product sheets, safety data sheets and operating instructions.

USERS:

EOD Units



GENERAL DYNAMICS

European Land Systems
Santa Bárbara Sistemas

GENERAL DYNAMICS European Land Systems
Santa Bárbara Sistemas

Vía de los Poblados, 3 - P.E. Cristalia - Edif. 7/8
28033 - Madrid
Telf. 91 585 01 10

www.gdels.com

Network Connectivity

■ DESCRIPTION

Solutions to link government agencies at national and international level, enabling users to share information from anywhere, at any time and in any situation.

■ APPLICATION

Design, develop, integrate and manage information and communication technologies.

■ INTERNATIONAL CREDENTIALS

- USA Programs: WIN-T, Rescue 21, Tactical Data Network (TDN) and Digital Technical Control (DTC)
- International Programs: Canada (IRIS) and the United Kingdom (BOWMAN)

USERS:

Governmental Organizations

Cyber Security

■ DESCRIPTION

Today's environments are characterized by high dynamism, management of large scale information and great demand for security. General Dynamics provides solutions ranging from secure voice and data products to families of cryptographic technologies.

■ APPLICATION

Provide users with total security in their communications.

■ INTERNATIONAL CREDENTIALS

USA Programs: IWN (Integrated Wireless Network).

USERS:

Governmental Organizations of USA and Allied Nations

ISR (Intelligence, Surveillance and Reconnaissance)

■ DESCRIPTION

General Dynamics ISR solutions incorporate capabilities that enable to see, identify, track and intercept enemy emitters. All these solutions provide simulation items in different environments, which allow training prior to actual use.

■ APPLICATION

Allow users obtaining, distributing and delivering critical information, with established requirements in terms of speed and accuracy.

■ INTERNATIONAL CREDENTIALS

- USA Programs: TAIS (Tactical Airspace Integration System) and IEWTPT
- Coastal Surveillance Programs in Canada and Australia

USERS:

Governmental Organizations of USA and Allied Nations



Training

■ DESCRIPTION

General Dynamics has developed a large number of applications that allow training customers in the following areas:

- Mission planning
- Urban combat
- War on drugs
- Response to emergency situations and domestic terrorism
- Planning, support for operational debriefing
- Modeling and simulation analysis

■ TECHNICAL CHARACTERISTICS/MEDIA

- Face-to-face and distance training
- PC interactive systems
- Electronic support systems
- Interactive electronic manuals

■ APPLICATION

Provide customers with training of appropriate level to meet their needs.

USERS:

Governmental Organizations of USA and Allied Nations

Eagle Special Vehicles

■ DESCRIPTION

4WD vehicle with high protection and mobility.

■ APPLICATION

Equipping Security Forces with the best solutions in wheeled vehicles, both in protection and mobility.

■ TECHNICAL CHARACTERISTICS/MEDIA

- Maximum speed = 110±5 km/h
- Autonomy: approx. 650 km (on hard surface and at a constant speed of 80 km/h)
- Turning circle = 15.0±0.5 m
- Vertical slope = 60% (from stop position)
- Steep slope = 40%
- Crew: up to five people
- Load: 3,500 kg

■ INTERNATIONAL CREDENTIALS

- Airport Security Forces in Switzerland
- Federal Police in Germany
- Armed Forces in Germany, Denmark and Switzerland

USERS:

Security Forces



GMV AEROSPACE AND DEFENCE S.A.U.

C/ Isaac Newton, 11 (PTM)
28760 - Tres Cantos
Madrid
Telf. 91 807 21 00

www.gmv.com

Integrated access, presence control, and security system (SCA)

■ DESCRIPTION

GMV offers an integrated access, presence control and security system (SCA) designed to control and oversee access to various zones of multiple centers, allowing control over the employee's working day and managing the integral security of facilities.

alarms, CCTV systems management... as well as helping to generate many different types of reports.

Regarding access control, this software allows monitoring of access to restricted areas, ranging from rooms or small offices to large buildings or even a set of them, adapting to the needs of each company.

As for presence control, working and holiday timetables and calendars can be defined to establish an employee working model as flexible as may be desired.

■ NATIONAL CREDENTIALS

Ministry of Defense (Headquarters).
Mapfre.

■ DOCUMENTATION

www.gmv.com

USERS:

Public infrastructures, critical infrastructures, banks...



SCA is a system that adapts to meet the actual management needs in any center, allowing access of a person in a given timeframe and route, keeping a record of all movements.

SCA allows all generated data to be stored for later reference and use for the purpose of access and presence control by means of readers, personnel registration and deregistration, profiles, etc.

■ TECHNICAL CHARACTERISTICS

All the information is centralized and stored on a database, and all recorded activity can be monitored through SCA software. The system is completely configurable: it can manage timetables, profiles, routes, workers, visits, intrusion

As security system, SCA can protect buildings of any type. Any intrusion trips an alarm both in the site itself and at the Alarm-Receiving Center (CRA).

■ APPLICATION

A business solution for both small work centers and, above all, for large companies, central office buildings and networks of local offices, thanks to its modular nature based on native TCP/IP protocols for the whole communication system.

SCA is an integral solution designed by GMV that broadens the functionalities of conventional access control systems. The end result comprehensively covers the main security aspects in the workplaces where it is installed.

Border Surveillance System

■ DESCRIPTION

The main objective of the EUROSUR Pilot Project is to provide the ability to create a persistent connection among different National Coordination Centers (NCC) with each other and with Frontex, by using an extensible system to share information that allows to:



- Reduce the number of illegal immigrants arriving undetected at Schengen area
- Reduce the number of deaths of immigrants at sea
- Increase internal security in Europe through the prevention of crime at the external borders.

■ TECHNICAL CHARACTERISTICS

Following European recommendations, the system makes extensive use of Open source technologies.

■ APPLICATION

GMV has developed technology and accumulated experience in the field of systems integration for border surveillance both at land and sea.

Particularly important is that GMV has been selected to develop the EUROSUR Pilot Project in the framework of the European Border Surveillance System of the European Commission and entrusted to FRONTEX.

■ NATIONAL CREDENTIALS

European Border Agency (FRONTEX).

■ DOCUMENTATION

www.gmv.com

USERS:

European Border Agency

Crisis Management: Operational Management Tool (HEGEO)

■ DESCRIPTION

HEGEO is a modular platform for the management of mobile resources in general and focused on public service resources in particular, especially security and emergency resources (security forces, health emergencies, firefighting, 112 platforms, etc.).

It has several modules whose complexity varies to meet user needs, allowing for all types of customization and parametrization.

■ TECHNICAL CHARACTERISTICS

It is made up mainly by a communications management module, a GIS module, a resource dispatch and fleet management module and a historical record and data processing module.

The flexibility of this tool and its possibilities of integration with other systems (call management systems, switching matrices, etc.) make it ideal for emergency management purposes.



■ APPLICATION

Mobile resource management systems based on the Operational Management Tool.

■ NATIONAL CREDENTIALS

Ministry of Interior, Governments of Autonomous Regions.

■ DOCUMENTATION

www.gmv.com

USERS:

Police, Civil Guard, Civil Protection

Baywatch II

■ DESCRIPTION

Baywatch II® is a personalized information service on new security vulnerabilities, whereby your company is informed of the vulnerability within a short period of time when it appears, by means of a report generated by GMV's information security experts.

The updating and maintenance of companies' information management systems is a complicated and constantly-changing activity, requiring new infrastructures that leave potential vulnerabilities exposed.

The best way for companies to defend themselves against the vulnerabilities and security holes in the information systems is to know them so they can react and avoid them.

■ TECHNICAL CHARACTERISTICS

Baywatch II® obtains the information from the most reliable and prestigious sources, such as:

- CERT (Computer Emergency Response Team) service
- Bugtraq
- Various support lists of manufacturers and the most important Security information lists
- Results of own investigations conducted by GMV's technical support team.

■ APPLICATION

Alerts of new security vulnerabilities in a short period of time, by means of a custom report.

■ DOCUMENTATION

www.gmv.com

USERS:

Financial institutions, governmental infrastructures (central, regional)





indra

INDRA SYSTEMS

Anabel Segura, 7
28108 - Alcobendas
Madrid
Telf. 91 480 50 00

www.indra.es

Indrabio/Indraid

■ DESCRIPTION

- The product automatically identifies individuals by using one or more of their main biometric features (fingerprint, face and iris) contained in medium and large databases
- High degree of reliability and robustness
- Cluster operation, so that the system is scalable according to performance requirements
- High availability and fault tolerance
- Processing of a large number of daily queries
- Obtaining results in a short time
- Management of a large number of records, usually by tens of millions
- Integration with external systems, by standardized interfaces that ensure interoperability
- Modules: capture and record of biometric samples, search engine, reports, audits, engineer workstation
- Support for the most demanding standards applicable (WSQ compression, BioAPI 2.0, ISO 19794-2/4/5/6, ANSI 378-2004, ANSI 381-2004, ANSI 385-2004, ANSI 379-2004, ANSI/NIST ITL-1-2007).

■ TECHNICAL CHARACTERISTICS

- From a hardware point of view, it is an open system since it can be installed and operated on different platforms regardless of the manufacturer, only depending on performance requirements and response times. An implementation for 1,000,000 records of 10 fingerprints each (10 million fingerprints) can be managed by a single HP Proliant DL785 machine with 8 Quad-Core CPUs and 64GB of RAM.
- Support for Windows and Linux platforms, both 32-bit and 64-bit.
- Supports Oracle as DBMS by default, and can alternatively be integrated with SQL Server and MySQL.
- Reliability backed by different evaluation tests and certification of external agents (IREX evaluation, MINEX certification, FVC2006 / 2004 / 2002 / 2000, FpVTE2003).

■ APPLICATION

AFIS system for automatic identification of individuals through multiple biometric features in medium and large databases with a high level of reliability and performance.

Detection of suspects or persons of interest to the police, prevention of fraud by identity duplication in ID and travel documents, border control or access control.

■ INTERNATIONAL CREDENTIALS

For reference: Data from 1,000,000 records, each incorporating 10 fingerprints, requires a DB storage space of 50GB plus 200GB of additional space as repository disk. Ethernet communication between clients and backend.

The implementation includes training for installation, administration and maintenance of the system and user training.

Typically, the solution includes implementation of stations for recording citizen's biometric features.

■ ECONOMIC BENEFITS

It is an optimal solution in terms of cost, with low investment requirements while maintaining an excellent level of reliability.

■ NON-ECONOMIC BENEFITS

It provides systems with a high degree of security, by using cutting-edge biometric technologies. It prevents fraud attempts of impersonation and identity duplication.

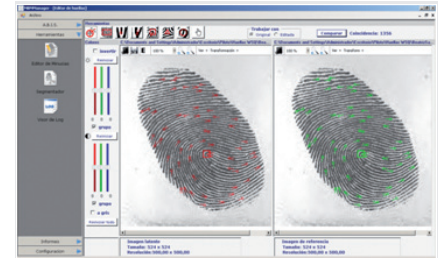
Enhanced with a high degree of performance, the automatic identification functionalities increase productivity by several levels, taking into account the high human cost resulting from people identification.

■ IMPLEMENTATION EFFORT

Estimated number of hours and resources required for the implementation of the product, solution or service.

■ COST

The cost of a specific implementation varies depending on the amount of information to be managed, number of client



stations, number of daily queries and expected response time.

■ DEADLINES

Variable depending on the number of individuals to be registered in the system and whether migrating existing biometric information (electronic or paper files) is required or not.

■ INTERNATIONAL CREDENTIALS

Passport issuance in the Republic of Mexico. Passport issuance in the Republic of Angola. ID card of Armed Forces in Kenya.

■ NATIONAL CREDENTIALS

Visit control in correctional facilities, General Secretariat of Penitentiary Institutions. It is one of the modules of the Fast Border Passage Pilot System.

■ DOCUMENTATION

User manual, installation manual and administration / operation manual.

USERS:

State Security Forces, local Police Forces, Population Registers

Indra Border Control

■ DESCRIPTION

The system automatically processes the traveler's ID documents (passports, ID cards, etc.).

The main subsystems are as follows:
- **Attended Check Point:** Document authenticity is verified. Monitoring of people entering and leaving the coun-

try is carried out against a Control List. All information on individuals crossing is recorded.



- **Automated Check Point (ABC):** Self-service module (kiosk + doors) in which border crossing is unattended. The processes carried out at this Point are as follows: reading and verification of travel documents (electronic document), live capture of biometric data (fingerprints and facial image) and biometric validation of traveler ID.
- **Verification Room:** Document authenticity and bearer ID are checked. Security features of the document are compared against faithful document databases. Individual's biometric data are captured for verification against national databases. Search applications are used to search for the individual or his/her document in control lists. All actions carried out in the control list are recorded. National databases of impediments to migration are updated.
- **Supervision Point:** Control gates operation is verified. Reports are issued on the use and performance of border check point.
- **Control List Management Modul:** Management of individuals with impediments for entering and leaving the country through the Control List. Management of entry / exit impediment data and information related to stolen or lost documents issued by foreign consulates.
- **Crossing Data Management Module:** Central database is updated with daily information from all local databases of border check points. Support for queries to central and local crossing

databases. Backup and debugging mechanisms are provided to maintain maximum efficiency and reliability. Historical data are stored.

■ TECHNICAL CHARACTERISTICS

It is a Web product implemented under J2EE platform and based on SOA architecture. Additionally, an analog product has been developed with .NET technology.

Developed to work with Oracle and MySQL databases in high availability.

Capability of implementation in different HW infrastructures according to client needs, since it is a scalable product. Communications take place under secure HTTPS protocol and information can be encrypted and stored.

■ APPLICATION

Baseline product that responds to international requirements for individuals crossing border check points.

■ REQUIREMENTS FOR IMPLEMENTATION

A J2EE-compliant application server is required, preferably running on Linux, though since it is a portable language it can run on Windows, UNIX and HP-UX. Client terminals must have Windows installed for device integration with Active-X technology. The .NET product runs as a client-server.

■ ECONOMIC BENEFITS

The economic benefits offered by the implementation of Product / Solution / Service are return on investment in the short-, medium- and long-term.

Economic benefits: Its low cost and low initial investment requirements make this solution to be an ideal alternative for border control.

Return on investment: Medium-term due to payment method, usually turnkey.

The implementation of automatic passage control allows reducing the number of officers assigned to border check points

■ NON-ECONOMIC BENEFITS

- Improved efficiency in traveler passage flow across borders
- As border check points perform standard tasks, development times of similar solutions for different governments are improved
- Baseline product allows reducing risks because it is a proven product
- Improved border security

■ IMPLEMENTATION EFFORT

Depending on the number of border check points required.

■ COST

Depending on the number of border check points required.

■ DEADLINES

Two and half / three months for implementation of the system.

■ INTERNATIONAL CREDENTIALS

Government of Portugal, Government of Cyprus.

■ NATIONAL CREDENTIALS

Border Fast Access Control.

USERS:

Public Administrations, Governments

BS6040

■ DESCRIPTION

The new BS6040 system allows quick and efficient inspection of packages and luggage. The system integrates the latest Dual-Energy technology, combined with algorithms to maximize the information provided to the operator. User involvement throughout the design phase results in an ergonomic system with a simple interface and all the functionalities that help to perform a more effective inspection and reduce fatigue.

■ TECHNICAL CHARACTERISTICS

- Size of tunnel: 620(W) x 410(H) [mm]
- Max. size of object: 610(W) x 405(H) [mm]
- Height of conveyor belt: approx. 695mm (adjustable)
- Speed of the belt and network frequency: 50Hz / 60Hz approx. 0.2 / 0.24 [m/s]
- Maximum load of the belt with even weight distribution: 120kg
- Standard resolution (wire detection): 38AWG (0.1mm)
- Standard penetration (steel): 28mm
- Standard X-ray dose (typical): 1.6μSv
- Cooling anode voltage: 150kV by hermetically sealed oil bath
- Beam orientation: Diagonal
- Radiation safety: Compliant with all sa-

nitary and radiation regulations applicable in Spain

- CE marking: Compliant with 98/37/CEE, 2006/95/CE, 2004/108/CE
- Sound pressure level: < 70dB (A)
- Operating / storage temperature: 0° - 40°C / -5°C - +60°C
- Humidity: 10% - 90% (no condensation)
- Linear or L-shaped multi-energy sensor
- Gray scale levels in memory: 65535
- Image rendering: B&W, color
- Image memory: 1280 x 1024 / 24-bit
- Image evaluation functions
- Organic / inorganic discrimination
- Improved visibility of dense materials
- Image inversion (negative)



■ APPLICATION

X-Ray inspection machine for packages with a maximum size of 60x40cm. Recommended for hand luggage and parcel post.

■ INTERNATIONAL CREDENTIALS

Power supply and data network connection.

■ ECONOMIC BENEFITS

Simple design that reduces maintenance costs.

■ NON-ECONOMIC BENEFITS

- Unique X-ray machine designed and manufactured in Spain
- Improved security in buildings

■ IMPLEMENTATION EFFORT

3 hours, 1 technician.

■ COST

Variable according to options.

■ DEADLINES

8 weeks.

■ NATIONAL CREDENTIALS

Indra, Multiscan Technologies.

■ DOCUMENTATION

Brochure. User, installation and maintenance manuals.

USERS:

Transportation facilities, critical public buildings (Ministries, Police Stations, Courts), prisons, office buildings, and generally any infrastructure where they need to control objects being introduced in the facilities

Indra Castor

■ DESCRIPTION

This is a web application. Functionality is divided into:

- Workflow of certificate, card and/or USB cryptographic token initial issuances
- Workflow of certificate, card and/or USB cryptographic token renewals
- Workflow of certificate, card and/or USB cryptographic token revocations
- Workflow of certificate, card and/or USB cryptographic token suspensions (temporary revocations) and reactivations
- Automatic notification of upcoming certificate expirations.
- Assignment of users to workflow roles
- Traceability and supervision of actions performed by users
- Monitoring of PKI status
- Logistics management for cryptographic cards and USB tokens

■ TECHNICAL CHARACTERISTICS

Java J2EE-based implementation that needs an application server to run. To date, Apache Tomcat 5.5.x, Oracle (BEA) Weblogic 10.x and IBM Websphere, and later versions, have been validated.

HW / SW requirements are those of hosting application servers.

Cards (or cryptographic tokens) validated up to date for the product are: Giesecke & Devrient, microelectronics (MMAR) and Aladdin (Safenet) tokens.

■ APPLICATION

Life-cycle management of certificates issued by a PKI infrastructure, whether in

software or cryptographic device, such as a card or a cryptographic USB token.

The main advantage of the product is that enables complete adaptation of workflows to the client needs and characteristics, because it is a product developed by Indra that can be adapted by the user.

■ REQUIREMENTS FOR IMPLEMENTATION

An application server. To date, Apache Tomcat 5.5.x, Oracle (BEA) Weblogic 10.x and IBM Websphere, and later versions, have been validated.

For certificate issuance, it is necessary a Safelayer KeyOne Certification Authority, version 3.0.9 or later.

■ ECONOMIC BENEFITS

Cost reduction for deploying applications that manage lifecycle workflows for certificates, cards and/or USB cryptographic tokens issued by a PKI infrastructure.

■ NON-ECONOMIC BENEFITS

Management of digital certificates issued by a PKI through a single web application, along with cryptographic devices (either USB tokens or cards) containing them.

Thanks to its customization capability, this application enables management of certificate, card and token processes to be consistent with the company's own internal processes, thus making PKI assimilation and management easier for company staff.

■ IMPLEMENTATION EFFORT

22 days of a Systems Technician, for standard version.

However, the main effort will be for personalizing the company workflows, which strongly depends on the company's characteristics and needs.

■ COST

Cost of license: €50,000 for every Certification Authority (CA) plus customizing services of company workflows which are variable according to the company's characteristics and needs.



■ DEADLINES

One month for standard version.
However, the main effort will be for personalizing the company workflows, which strongly depends on the company's characteristics and needs.

■ INTERNATIONAL CREDENTIALS

European System of Central Banks (ESCB), Central Bank of Morocco (Bank Al-Maghrib).

■ NATIONAL CREDENTIALS

Ministry of Defense (Command and Control Network), Association of Registrars, Union Fenosa.

■ DOCUMENTATION

The following documentation is in English and Spanish. There is also a French version.

- Installation and Configuration Guide
- Maintenance Guide
- User Manual, for each workflow role

USERS:

Any medium / large organizations:
- Private companies: Protection of internal communications (employees) and external communications (suppliers, customers and partners)
- Public bodies: Protection of internal communications (officials) and external communications (suppliers, citizens and other public bodies)

Mobile Command Center

■ DESCRIPTION

Indra has three different models of mobile command center tailored to security forces and emergency services of different sizes and operational capabilities, ranging from a simple trailer easily adaptable to any vehicle (CMM-L), up to 4WD or 6WD trucks (CMM-F) capable to access any scenario.

Depending on final configuration, they can provide near and remote communications both by radio and satellite.

Access to security and emergency applications available in main assistance and management centers is also provided, as well as a safe space for commanders and authorities.

■ TECHNICAL CHARACTERISTICS

- Mobility: From trailers to all-terrain trucks
- Data communications: VSAT, Thuraya, Inmarsat, Iridium, WIMAX, etc.
- Voice communications: TETRA, DMO Gateway, PMR/DMR, VoIP, Voice recording, etc.
- Video systems: Perimeter surveillance, Video recording, Videoconference and DTT
- Autonomy: From 12 to 48 hours, depending on the model

■ APPLICATION

Providing security forces and emergency units with the possibility of having an advanced command center that can be moved to where the emergency occurred.

Enabling commanders to establish communications both with operational units deployed on the ground and superiors.

■ INTERNATIONAL CREDENTIALS

Physical security and emergency management center.

■ ECONOMIC BENEFITS

Reduction of personnel and resources needed for the operations.

■ NON-ECONOMIC BENEFITS

Improved coordination of personnel and citizen proximity.

Implementation of an ad-hoc communications network where there is very limited or no coverage of other networks.

■ IMPLEMENTATION EFFORT

Depending on model and extent of integration with external systems.

■ COST

The cost varies ranging from €250,000 (CMM-L) to €1,000,000 (CMM-F).

■ DEADLINES

Between 3 months (CMM-L) and 9 months (CMM-F), once features and options are defined.

■ NATIONAL CREDENTIALS

Madrid City Council, Integrated Emergency Center (CISEM, by its acronym in Spanish).

USERS:

- Security Forces and Emergency Centers
- Private companies with large infrastructures to be protected

Secure communications over GSM and Telefonica networks

■ DESCRIPTION

Secure calls use a GSM data channel in transparent mode which, together with a high performance audio encoder, establishes communications without quality loss and with a delay of only 0.5 seconds.

Security is based on the Terminal's hardware and software architecture, which are specifically designed to ensure confidentiality, implementing an asymmetric encryption algorithm based on Elliptic Curve cryptography for key negotiation, and an AES symmetric encryption algorithm for voice encryption.

When establishing a secure call, both ends perform authentication of the remote end by checking respective certificates and e-signatures. After this phase, both terminals negotiate the generation of a random session key which is renewed in each call, thanks to the Diffie-Heilman key exchange protocol.

User certificates stored by the SCS-251 are part of a Public Key Infrastructure (PKI) and are generated and signed by the Certification Authority (CA) implemented in the Management Center.

The Management Center allows any organization managing and administering its own CA and user certificates, as well as configuring terminals, both locally and remotely.

The operation of the SCS-251 is equivalent to any commercial mobile phone. A secure call is made by only pressing a specific and clearly differentiated key. The display permanently shows the secure mode established, with voice feedback on call progress.

Our demand for quality along with the demand from our customer, like the National Security Agency, make international security certifications to be one of our policies.

■ TECHNICAL CHARACTERISTICS

Standard phone: Display: 1.8" TFT, with 256,000 colors, Intel Xscale Processor (ARM9, up to 600MIPS), 32MB SDRAM, 32MB Flash, Linux Operating System, Quad band GSM (850/900/1800/1900 MHz), USB and RS-232 Interfaces, Accessories compatible with Siemens, Caller ID, Call History, Speed Dial, SMS Mobile Originated / Mobile Terminated, Diary / Contacts, Applications

(Calendar, Clock, Calculator, Image Viewer, Games), Configurable User Profiles.

Secure Mode: End-to-end secure communications, Authentication based on certificates and digital signatures, Random session keys generated on each call, AES and elliptic curve encryption algorithms, High-performance and high-quality audio codec (sampling 128 Kbits/sec), Integration with GSMSec Management Center to perform Management and Administration tasks, terminal Secure and Remote Management, Delay under 0.5 sec.

Other Characteristics:

Size: 112 x 48 x 19mm; Weight: 99gr; Display: 27 x 31mm (visible area); Resolution: 132 x 176 pixels; Internal battery: Li-Ion 1100 mA/h; Autonomy in standby: 125h; Autonomy in use: 4h; Temperature range: -10°C to +50°C.

■ APPLICATION

The secure SCS-251 terminal enables establishment of an end-to-end secure voice call, using a GSM network from any operator, with remote user authentication through validation of digital signatures and certificates.

These validation capabilities for digital signatures and certificates allow conversational partners in a public key infrastructure (PKI) proving their identities through mutual validation of their user certificates. The terminals can be locally and/or remotely managed and administered from GSMSec Management Center (Certification Authority), also developed by INDRA.

■ INTERNATIONAL CREDENTIALS

SIM card of any mobile operator with data call service (CSD) enabled.

■ ECONOMIC BENEFITS

Prevent economic damage resulting from information leaks.

■ NON-ECONOMIC BENEFITS

In today's world, it is vital to have quick and accurate information for decision making, especially at senior management levels. Nowadays, the use of mobile phones for exchanging confidential information is a necessity.

In the GSM network, encryption is only between the mobile phone and the Base Station. After this point, all information is routed without any protection, and in some countries operators do not implement minimal security mechanisms.

Unauthorized interception of GSM communications is a fact that in recent years has greatly evolved, from expensive and complex proximity systems, such as the "man in the middle" type, to the use of equipment capable of remotely decoding and recording GSM communications.

■ IMPLEMENTATION EFFORT

Implementation is not required.

■ COST

€2,500 - €3,500, depending on terminal type.

■ DEADLINES

Immediate availability.

■ INTERNATIONAL CREDENTIALS

Governments and Intelligence Agencies of foreign countries.

■ NATIONAL CREDENTIALS

Ministry of Defense (National Intelligence Center).

USERS:

Ministry of Defense, Senior Officials of Public Administration, State Security Forces

DMC500

■ DESCRIPTION

Multi-zone metal detector arch. Adjustable sensitivity and LEDs indication of the area where the metal object is being carried.

■ TECHNICAL CHARACTERISTICS

- IP55 Standard
- Durable construction based on metal and PVC alloys
- LCD display with menu in two languages
- Adjustable sound alarm
- LEDs visual alarm
- 18 independent detection zones
- Search is divided into separate areas
- Configurable sensitivity among 255 levels for each area
- Individuals and alarms counter
- Password protected configuration
- The use of different frequencies enables adjacent operation of multiple arches
- Networking. Through the RS485 port,

up to 32 arches can be connected

■ APPLICATION

Multi-zone Metal Detector Arch.

■ REQUIREMENTS FOR IMPLEMENTATION

Connection to power supply.

■ ECONOMIC BENEFITS

Low maintenance cost.

■ NON-ECONOMIC BENEFITS

Adjustable high sensitivity.

■ IMPLEMENTATION EFFORT

2 hours, 2 technicians.

■ DEADLINES

4 weeks.

■ DOCUMENTATION

Brochure. User, installation and maintenance manuals.

USERS:

Critical infrastructures



FAEDO. Fire Alert Early Detection Outdoors

■ DESCRIPTION

The system consists of several modules which enable fire prevention, detection, extinction and forensic analysis management. The full version includes a communications network, visible and thermal cameras for fire detection, fire evolution simulation in real time, a decision-making tool, geo-location of units, etc.

It can be implemented in full or by modules which can reuse the existing infrastructure.

■ APPLICATION

Comprehensive forest fire management system. It can be implemented in full or by modules.

■ REQUIREMENTS FOR IMPLEMENTATION

Study of scope and already implemented technologies for reuse and integration into the system.

Variable depending on the modules to be implemented and existing infrastructure.

■ ECONOMIC BENEFITS

Drastic reduction of the area burned and extinction costs.

■ NON-ECONOMIC BENEFITS

Improved safety of resources involved in the extinction.



■ IMPLEMENTATION EFFORT

Variable depending on the modules to be implemented and existing infrastructure.

■ COST

Variable depending on the modules to be implemented and existing infrastructure.

■ NATIONAL CREDENTIALS

Extremadura Regional Government, Galicia Regional Government.

USERS:

Forest protection and fire control divisions

I-Scode

■ DESCRIPTION

Automatic, integrated and adaptable solution to prevent vulnerabilities in source code.

■ TECHNICAL CHARACTERISTICS

Open system developed with open source technologies, ensuring portability to proprietary technologies.

■ APPLICATION

Multi-language Source Code analysis and review to identify and mitigate security vulnerabilities in the code.

■ REQUIREMENTS FOR IMPLEMENTATION

UNIX or Linux servers, web servers, application servers, Relational database servers, Communications.
Licenses of code analyzer.

■ ECONOMIC BENEFITS

Tool providing professional services for its integration. Recurring maintenance costs.

■ IMPLEMENTATION EFFORT

Depending on the scope.
I-Scode is also provided as Software as a Service (SaaS) in the cloud.



■ COST

Depending on the scope.

■ DEADLINES

Depending on the scope.

■ NATIONAL CREDENTIALS

Vodafone.

USERS:

Any Market / Client with Application Management (AM), wanting to strengthen it and turn it into a secure AM

I-TVD (Indra-Document Verification Technology)

■ DESCRIPTION

The verification system can work as a stand-alone device or connected to a central server, which collects information from inspections carried out by the different inspection systems and carries out remotely updating both of the verification application and the document database.

The solution can also be configured as stationary workstation using a desktop computer or as a mobile workstation using a laptop computer. The document verifier size allows it to go onboard a patrol car connected to the vehicle's cigarette lighter or to be installed in an office.

■ TECHNICAL CHARACTERISTICS

The solution consists of three elements: one hardware element and two software packages. The hardware element is a full-page document reader with capability to capture images with different light sources: Visible (430-700nm), UV (365nm) and infrared (890nm).

The software is an application to verify Indra documents, I-TVD, .Net and a database containing reference images of official ID and travel documents from other countries.

■ APPLICATION

This solution is intended for use as a support tool by any Officer when needing to identify a citizen whether national or foreign.

Specifically, the solution performs a number of automatic checks on any ID documents that a citizen may present (ID card, e-ID card, Passport, e-Passport, Driving license, Resident Card, etc.) in order to detect possible counterfeits.

Based on document images obtained under different light sources (Visible, Ultraviolet and Infrared), it detects the type of document and the country of issuance, analyzing security patterns defined for that particular document. It also indicates the Officer what other complementary security measures can manually verify (watermarks, holograms, etc.).

Additionally, this solution allows making queries to a document database in order to check the parsed document against reference images of the same document.

Finally, it enables real-time delivery of images taken by the document scanner and verification results to the Central Station, where they can be analyzed by forensic document experts.

■ REQUIREMENTS FOR IMPLEMENTATION

Database / Software, Hardware, communications and training requirements.

The solution can be implemented on Windows operating systems and half day training is required for using it.

■ ECONOMIC BENEFITS

Economic benefits cannot be quantified because of the nature of the solution. Detecting and seizing counterfeit documents prevents offences to be committed and it is very likely that they would be economic offences.

■ NON-ECONOMIC BENEFITS

Non-economic benefits are clear, since controlling document authenticity would allow seizing numerous forgeries, and bearers could be arrested preventing many types of crimes.

■ IMPLEMENTATION EFFORT

Depending on the number of stations to be installed and their geographical distribution.



■ COST

The cost depends on the number of verifying stations and their configuration, either stand-alone or connected to a central server.

■ DEADLINES

The solution may be quickly implemented by parameterizing some customer-specific values, and depending on the documents and the reader to be used.

■ INTERNATIONAL CREDENTIALS

The solution has been successfully implemented in Portugal border check points.

■ NATIONAL CREDENTIALS

The solution is used by Madrid Municipal Police, Alcobendas Municipal Police, Civil Guard, Enagas and Melia Hotels. It is also one of the modules of the Fast Border Passage Pilot System.

USERS:

Solution designed for all security forces that must make identifications of national and foreign citizens: State Security Forces (Airport, Terrestrial or Maritime Border Control; Access Control to governmental departments and bodies; Individuals Identification in the streets, etc.), Local and Regional Police Forces (Access Control to governmental departments and bodies, individual's identification in the streets, police stations, etc.)

Portable printer for ID documents

■ DESCRIPTION

This is a printer for ID documents of small size, weight and cost compared to others in the sector. All security measures needed for personalization of ID cards are implemented, compliant with ISO/IEC 7816 in all its parts. It is an ideal low-cost solution for small-size permanent or mobile offices. It may also be interesting for Embassies, airports, prisons, hospitals, etc.

The main capabilities of the printer are as follows:

- Printing of different optical elements in black or 8-bit gray scale on both sides of the card
- Printing of True-Type characters in any language
- Scanned pictures of up to 1600dpi.
- Printing with Angle of Incidence (CLI) by rotating the card
- Chip communication for reading and/or recording, according to configuration
- Reading of card's pre-printed elements and text alignment towards them (optional)
- Microtext (<0.2mm) (optional)
- Implementation of CLI and MLI by glass prism (optional)
- Calculations and processes to customize MRZ lines, barcodes, 2D barcodes (optional and implemented in the system DLLs)
- Printing speed between 50-80 ISO ID1 cards per hour
- Activated carbon particle filter
- Electromagnetically compatible
- Manual or automatic card feed (using an additional module)
- Easy integration with ID Cards issuance environments

- Robust and easy to maintain system

The printer can be configured and specified according to the needs of each client and project. It can also be combined with other modules to get color printing or to be connected to an internal PC with Ethernet connection. Check for additional capabilities.

■ TECHNICAL CHARACTERISTICS

Main features are:

- Size: 424 x 238 x 403mm
- Approx. weight: 22kg
- Power supply: 110VAC to 240VAC
- Consumption under 7A (depending on configuration)
- Noise: lower than 65dB (A)
- Laser type: Fiber laser
- Laser power: 10W CW
- Laser lifespan: 20,000 hours
- Laser class: 1 IEC 60825
- Connection interface: USB1.1 or 2.0
- Air ventilation
- Regulations and official approvals:
 - ISO/IEC 7816 (all parts)
 - RoHS
 - ISO 9001:2008
 - CE

■ APPLICATION

Lightweight and easily relocatable printer, with capability for customizing ID Cards. Compliant with all parts of the ISO/IEC 7816 standard and ideal to be used both in small dispatch offices and mobile offices.

Approach of ID Card issuing points to citizens, since Documents can be immediately issued and in a greater number of issuing points.

■ INTERNATIONAL CREDENTIALS

PC running on Windows XP or higher and USB connection. IIS and Framework Net 3.5 or higher.



Equipos Inhibidores de Instalación fija



Equipos inhibidores portátiles



- 1 TITÁN Banda I
Inhibidor de telemandos
- 2 TITÁN 850
Inhibidor de telemandos
- 3 TITÁN Banda II
Inhibidor de telefonía móvil
- 4 TITÁN UMTS
Inhibidor de telefonía móvil

- 5 TITÁN GSM / WCDMA
Inhibidor de telefonía móvil *
- 6 TITÁN Agenda
Inhibidor de telefonía móvil y Wifi
- 7 TITÁN Maletín RF
Inhibidor de telemandos
- 8 TITÁN Maletín de telefonía móvil
Inhibidor de telefonía móvil

- 9 TITÁN Trolley
Inhibidor de telefonía móvil *
- 10 TITÁN Trolley Gama Alta
Inhibidor de telefonía móvil *

■ ECONOMIC BENEFITS

As it is an affordable model, this printer allows creating small issuance offices or additional mobile offices. This way, the number of issuance offices is increased approaching them to citizens.

This will also reduce costs for authorities moving to rural areas.

■ NON-ECONOMIC BENEFITS

Better service to citizens by making of ID Cards issuance easier for them; the issuance system is approached to the population resulting in better controlled census. Citizens can obtain their ID documents in small and mobile offices in just one visit.

■ IMPLEMENTATION EFFORT

The printer must be configured according to customer requirements and specified layouts for the ID card to be customized.

■ COST

Depending on number of units.

■ DEADLINES

Depending on number of units.

■ INTERNATIONAL CREDENTIALS

Issuance system of Mexican Digital passport, Issuance of Maritime Passport, and Modernization of Panama Maritime Authority, among others.

■ NATIONAL CREDENTIALS

National ID Card, Spanish e-Passport and Professional Card of National Police Forces, among others.

■ DOCUMENTATION

Manuals and CD with software.

USERS:

Mobile and stationary ID card issuance offices. Document issuance points at Embassies, prisons, airports, etc.

RF and phone jammers

■ DESCRIPTION

Jamming solutions against remote activation of explosives and illicit or improper use of mobile communications in any type of setting (stationary or mobile).

Flexible and configurable system depending on the needs of the environment, enabling remote monitoring and control through different devices, and advanced user management.

■ TECHNICAL CHARACTERISTICS

Modular systems based on next generation equipment capable of efficiently transmitting interfering signals against any radio frequency threat.

Such transmissions are effectively configured for a perfect definition of the area to be inhibited, thus preventing external interferences and not affecting other communications systems.

■ APPLICATION

Getting a protection radius free of wireless communications through the installation and certification of a jamming system.

■ REQUIREMENTS FOR IMPLEMENTATION

Previous study of target scenario.

■ ECONOMIC BENEFITS

Short- or medium-term return on investment.

■ NON-ECONOMIC BENEFITS

Risks reduction by providing greater security.

■ IMPLEMENTATION EFFORT

None; once installed, product utilization is very simple.

■ COST

Depending on the scope.

■ DEADLINES

Depending on the scope.

■ INTERNATIONAL CREDENTIALS

VIP convoy protection in central Africa. Jamming of cell phones communications in prisons in Latin America.

■ NATIONAL CREDENTIALS

Local Police Forces, General Directorate of Police, Civil Guard, DEFEX, Madrid City Council, Correctional Facilities and Ministry of Defense (23 prisons), senior managers of several companies.

■ DOCUMENTATION

Leaflet of jamming solutions.

USERS:

Security Forces, Correctional Facilities, public bodies and official buildings

Integra

■ DESCRIPTION

The Integra system enables management and integration of different security subsystems, and has capability to expand or integrate additional security systems according to the requirements of our clients, such as:

- CCTV Management System / Video recording system
- Intrusion Alarms / Fire alarms
- Perimeter Control / Access Control / Accreditation Control
- License plate recognition system
- Intercom / PA system
- Maintenance / Technical alarms
- Centralization, Management and Control Systems, etc.

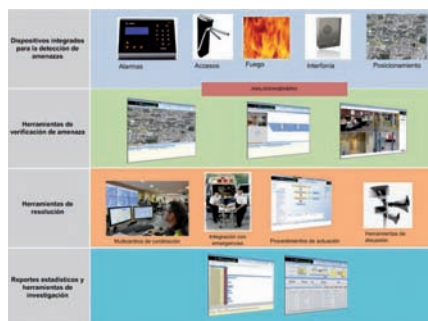
■ TECHNICAL CHARACTERISTICS

The system core consists of a relational database for critical mission that services all servers and workstations of the system. The system can be configured as a single server / workstation or with multiple servers and workstations.

Each server can hosts up to 200 simultaneous implementations with real-time information of their status.

The system has a comprehensive set of applications specifically designed to control and manage security systems.

All applications have an audit system that allows tracking of all actions carried out by system users.



■ APPLICATION

Software platform for integration and centralized management of anti-intrusion systems, access control and CCTV.

This platform can interoperate with numerous intrusion alarm switchboards, CCTV systems, both analog and IP, and access control systems, to allow the

operator having a global view of infrastructure security and properly managing alarms.

■ REQUIREMENTS FOR IMPLEMENTATION

The system is designed to run on mid-range PCs without excessive requirements. The system is run with a centralized or distributed layout, and user PCs can be implemented in each protected system.

Only when the number of systems to protect is very high, the central database will require a server cluster with a disk array and a first-line database: Oracle, SQL Server Enterprise, etc..

■ ECONOMIC BENEFITS

The Integra platform enables central management of all security equipment, so it is possible to reduce the control center equipment. Since operators are trained, the productivity is improved allowing a reduction of manpower in the control center.

■ NON-ECONOMIC BENEFITS

The Integra platform allows the integration of further security systems without cost impact on control center or manpower needed.

Each additional security system integrated into the Control Center is simply integrated into the platform and managed as any other system, improving the overall security level in the organization.

■ IMPLEMENTATION EFFORT

Deadline for implementation is highly dependent on the number of systems to protect and, especially, on the number of intrusion systems, CCTV, and access control points to be integrated, estimating 2 months / man for each additional system. The implementation of the product itself is simple and should not take longer than one month.

■ COST

The cost of implementation is highly dependent on the number of systems to protect and the number of user stations. In any case, the product is sold by licenses, so the cost is always precisely adjusted to customer needs.

■ DEADLINES

The deadline for implementation is highly dependent on the number of systems to protect and the number of user stations. In any case, an average implementation can take less than one month.

■ INTERNATIONAL CREDENTIALS

Suburban train in Mexico, Repsol YPF Building in Puerto Madero.

■ NATIONAL CREDENTIALS

Gas Natural Fenosa, Madrid City Council (CISEM), Expo Zaragoza, Navantia, Renfe, Port of Barcelona, Port Forum, La Caixa, Caixa de Sabadell, Barclays, Cobe-ga, Inversis, Postal Service, Indra, etc.

■ DOCUMENTATION

Maintenance and user manuals.

USERS:

This product is targeted to any organizational unit responsible for the protection and security of any type of infrastructure, either a proprietary infrastructure (offices, barracks, police station, etc.) or a third-party critical infrastructure whose security has been entrusted

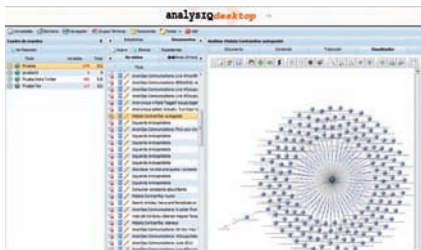
iSAFETY

■ DESCRIPTION

This Integrated Emergency Management System meets all functional and operational needs of an Emergency and Security Assistance and Dispatch Center. The system consists of the following modules:

- Comprehensive communications management module. It is the single entry point for all communications (telephone, radio, TETRA / TETRAPOL, etc.). It has the capability to discriminate and locate received calls.
- Receiver Module. When an incoming call is received, it is classified according to established protocols.
- Computer-assisted dispatch module for incidents resolution that provides a fast and accurate resolution of planned services and emergencies according to operating protocols.
- Agencies' operational resources Management Module.
- Module for graphical rendering of geo-referenced information. It also enables location of emergency units, calls, affected areas, etc.
- Administration and configuration module that makes system adaptation easier for current and future needs.

- Consultation, data statistical treatment and reporting module.
- Crisis management module: emergency planning management, activation workflow, maintenance plans, mass notification.



■ TECHNICAL CHARACTERISTICS

- Client: RIA (Rids Internet Application) technologies; semi-thin clients; multi-platform.
- GIS Viewer: Multi-platform Geographic Viewer with map viewer.
- Server Services: Java J2EE.
- Databases: Independent (RDBMS). Tested on Oracle, SQL Server, MySQL, PostgreSQL, Informix, DB2.
- Architecture: Service-oriented (SOA).

■ APPLICATION

The system consists of a set of modules that enable implementation of systems for Emergency and Security Incidents Response, Dispatch of resources, and Communications integration and reporting, based on geographic information systems (GIS).

Comprehensive management of alerts, incidents, planned events and emergencies, through a unified interface.

Immediate, coordinated and quality response.

Operation in Multi-Center and Multi-Agency environments.

■ INTERNATIONAL CREDENTIALS

iSafety is a system designed to adapt to almost any working environment. Only requirements for implementation are:

- J2EE Platform in server
- Relational Database

■ ECONOMIC BENEFITS

Improved response times.

- Rational and optimized use of human and material resources.
- Consolidated and valuable informa-

tion for commanders and responsible personnel.

100% Spanish system designed and implemented by Indra. It can be customized without the high cost of other solutions.

Reduction in Total Cost of Ownership, thanks to a flexible maintenance and licensing model.

Module-based commercial solution (COTS) shortening implementation deadlines against custom implementations.

■ NON-ECONOMIC BENEFITS

Immediate, coordinated and quality response to emergency situations, providing benefits such as:

- Significant improvement in citizen / user perception of public / private infrastructures security.
- Prevention of security incidents with unpredictable social impact.
- Modern and dynamic image; the system allows creating Crisis Management Rooms, Command and Control rooms and even Mobile Command Units highly focused to everyday usage in public environments, being usually subject to articles of interest and institutional visits for what it represents.
- Effective coordination of personnel in emergency / security incident management, reducing management costs.

■ IMPLEMENTATION EFFORT

Depending on multiple factors, such as number of operators, tool coverage, implemented modules, available and usable infrastructures... A typical project usually takes between 6 and 12 months.

■ COST

The cost is highly variable, depending on solution size, number of integrations, geographical distribution, etc.

■ DEADLINES

See 'Implementation Effort'.

■ INTERNATIONAL CREDENTIALS

Single Coordination and Control Center (SCCC).

Government of Buenos Aires (Argentina).

■ NATIONAL CREDENTIALS

State Secretariat for Security. Directorate General of Police. 091 Room Project of the Police Force.

Integrated Emergency and Security Center of Madrid (CISEM). Madrid City Council.

■ DOCUMENTATION

Available upon request.

USERS:

- Control, Command and Information Centers (C2i / C4i4)
- Emergency and Security Centers (Fire Protection, Health Services, Police, Civil Protection) and 112 Centers
- Control Centers for Border Surveillance and Protection of critical infrastructures (Energy, Transport and traffic...)
- Surveillance and Tracking Stations (Gender Violence)

I-Think

■ DESCRIPTION

Intelligence information management and identification through multiple-source data capture tools, with automatic and manual information analysis and specific developments for grouping files, tracking, consultation, indicators and alerts.

■ TECHNICAL CHARACTERISTICS

Open System based on UNIX, LINUX, JAVA programming standards and relational Databases.

■ APPLICATION

Intelligence tool for obtaining relevant information that allows discovering unnoticed relationships in the information collected, to be applied in decision-making.

■ INTERNATIONAL CREDENTIALS

Unix or Linux servers, Relational Databases and Communications.

■ ECONOMIC BENEFITS

Especially designed tool for competitive intelligence, with a very steep learning curve.

■ NON-ECONOMIC BENEFITS

Access to information from Open and Privileged Sources in a systematic way. Tracking and Alarms.

■ IMPLEMENTATION EFFORT

Depending on the scope.
I-Think is also provided as Software as a Service (SaaS) in the cloud.

■ COST

Depending on the scope.

■ DEADLINES

Depending on the scope.

■ NATIONAL CREDENTIALS

Several Clients of Security Forces and private companies.

USERS:

Security Forces. Private Companies. Public Administration in general

LHA "Man Overboard" Location and Follow-up System

■ DESCRIPTION

Operation: When a crew member accidentally falls overboard, the radio-beacon is automatically switched on during immersion and emits an audio emergency signal in the international SOS frequency of 121.5MHz, together with precise geographical positioning, thanks to an integrated GPS micro-receiver. The receiver installed on the commanding bridge gets the signal in less than a minute, giving all information necessary for rescue, including distance to the victim and delay to be followed for his/her location.

It discriminates signals from up to 100 simultaneous beacons, differentiating identification and geographical position.

Features:

- GPS location.
- Elimination of false alarms (thanks to a dual sensor for automatic activation).
- Additional information, such as Serial Number and vessel MMSI, is transmitted to identify those responsible for false alarms triggering emergency management to DGMM

Modules:

RP-GPSLHA personal radio-beacon, alarm receivers (NMEALHA, CRX-LHA, PRX-LHA).

■ TECHNICAL CHARACTERISTICS

Radio-electrical Specifications

- Carrier Frequency:
Operation, 121.5MHz (Ref. 3)
Test, 121.65MHz
- Frequency Accuracy: < +/- 3.5KHz
- Bandwidth:
Audio, +/- 3.5KHz
Data, +/- 30KHz
- ERP transmission: 75mW
- In-band spurious emissions: < 2uW @ 120KHz
- Modulation: AM. Type A3X (Ref. 5 and Appendix 1 Ref. 7) Modulation rate > 85%
- Modulator: Audio. Frequency ramp-down (Annex 1 of Ref. 5)
- Data. FSK 8 - 10KHz
- Electroluminescent wire: Red, separated from VHF antenna
- VHF Antenna: Adapted 1/4 wave
- GPS Antenna-Receiver: Integrated into the VHF antenna end

Compliance with Safety Regulations:

- Rating: CE marking (art.4.1a Ref. 8)
- Test methods: EN60945, EN60950-1 (Ref. 8 and 11) EMI/EMC: Rating: CE marking (art. 4.1b Ref. 8)
- Test methods: EN301489-3 (Ref. 9)
- Radio-electric spectrum protection: Rating: CE marking (art. 4.2 Ref. 8)
- Test methods: EN300152-2 y EN300152-3 (Ref. 2, 5 and 6)
- Access to emergency services: Rating: CE marking (art. 4.3e Ref. 8)
- Test methods: EN300152-3 (Ref. 2 and 6) RoHS / WEEE: Compliant with Ref. 9

Physical specifications:

- Size: Length x Width x Height:
87 x 42 x 73mm
- Weight: Typical 350gr
- Temperature: -20°C / +55°C, Operation -20°C / +55°C
- Storage / Transport relative Humidity: 100% no condensation
- Vibration-Shock: Compliant with ETSI EN 300 152-3 (Ref. 4)
- Saline corrosion: Compliant with ETSI EN 300 152-3 (Ref. 4)
- Resistance to pollutants: Compliant with ETSI EN 300 152-3 (Ref. 4)

■ APPLICATION

The "Man Overboard" Location and Follow-up System helps in the tasks of searching and rescuing people accidentally falling into the water from a boat.

The system consists of a RP-GPS-LHA personal radio-beacon integrated in a

lifejacket and a base receiver (various models) located on the commanding bridge of the vessel.

The system not only alerts of an emergency, but it also allows pinpointing the location of the injured crewmember thanks to the victim(s) reported GPS position.

■ REQUIREMENTS FOR IMPLEMENTATION

Specific training for maintenance. Approved installers. NMEA receiver software application; Windows 2000 or higher required.

■ ECONOMIC BENEFITS

Maintenance service required every 2 years.

Viewing of active beacons position on a marine navigation plotter.

■ NON-ECONOMIC BENEFITS

- Improved coverage, response time and scope against classic equipment.
- Simultaneous management of up to 100 radio-beacons.
- Customizable data delivery, according to customer needs.

■ IMPLEMENTATION EFFORT

24 hours, 2 technicians.



■ COST

€300 / radio-beacon
€3,030 / CRX receiver
€1,600 / NMEA receiver + PC Application

■ DEADLINES

1 week (depending on stock and requested amount). We do not have the PRX receiver in stock; it is manufactured on demand.

■ INTERNATIONAL CREDENTIALS

Biardo. Civilian personnel transport to oil platforms by helicopter. Antarctic

Campaign of the Army. Rescue Teams in PEMEX Ships

■ NATIONAL CREDENTIALS

Fishing Fleet. Rodman. Repnaval. Imnasa.

■ DOCUMENTATION

Brochure. User, installation and maintenance manuals.

USERS:

- Fishing Fleet, Working Vessels, Institutional Fleet, Sport Vessels, Navy Ships
- Civilian personnel transport to oil platforms by helicopter
- Ports staff

NEPTUNO Multichannel audio recorder

■ DESCRIPTION

The Neptuno recorder is a signal multichannel recording system for civil and military applications. The recorder captures signals in multichannel and records them in analog or digital media, with telephone or wider bandwidth. Data are digitally stored for subsequent playback, transmission or database management.

Stored data can be transferred to backup media either automatically or manually.

Its server / client architecture allows multiuser and unattended operation. It has its own user interface, while maintaining remote control capability.

■ TECHNICAL CHARACTERISTICS

- Redundant system with high availability
- Raid type 1
- Available in 1:1 configuration
- Capacity ranging between 4 and 96 input channels (analog or digital) and 2 output channels.

Interfaces:

- Analog inputs / outputs, different bandwidths
- Digital inputs / outputs for ISDN lines
- Channelized E1 digital inputs / outputs
- VoIP digital inputs / outputs
- PBX switchboards

- PCM recording
- Loop start, ground start, 2/4 wire E&M, telephony channels
- Integration with Tetrapol networks
- RDSI and E1 digital lines
- Backup Media: DAT tape, DVD-RAM, hard drive or NAS
- Client / server architecture for IHM
- Programming API for integration with third-party systems

■ APPLICATION

Neptuno recorder family can capture signals in multichannel, in digital or analog support, with telephone or higher bandwidth for future reference, analysis, etc., in civil and military environments where recording of voice communications established is required.

■ INTERNATIONAL CREDENTIALS

Training course for user's adaptation to the new recording / playback application.

■ ECONOMIC BENEFITS

- COTS-based solution
- Low maintenance cost

■ NON-ECONOMIC BENEFITS

Redundant system ensuring high availability of the product and minimal service degradation in case of failure / malfunction. Integration of metadata from end-user common applications. Tailored integrations with communications and management systems.

Unattended operation both in recording and performing backups.



■ IMPLEMENTATION EFFORT

Implementation (80 hours). Training course (8 hours).

■ COST

Approx. €20,000 for a typical configuration of 32 analog channels.

■ DEADLINES

8 weeks.

■ INTERNATIONAL CREDENTIALS

Air traffic control systems implemented by Indra Systems in: Portugal, Bosnia, Libya, Ecuador, Uruguay, Pakistan, China, India, Kuwait, etc., both civil and military.

Integration with Tetrapol networks implemented by EADS in Mexico.

■ NATIONAL CREDENTIALS

SIRDEE network and Local Police Forces (Daganzo, Majadahonda, Leon, etc.).

■ DOCUMENTATION

Leaflet.

USERS:

Emergency systems, Civil or military air traffic control, Call and response centers, Command and control centers

PKI Infrastructures Management and Control Platform

■ DESCRIPTION

The solution is based on the implementation of the software products included in the Safelayer KeyOne suite, which allows issuing and managing digital certificates:

- According to CWA security policies and recommendations and/or CIMC Common Criteria
- With Common Criteria EAL 4+ certification
- Complete range of value-added services, such as timestamps (TSA) and certificate online validation (OCSP)
- Programming language that enables full customization of products, allowing their full integration into the organization's processes by using the organization's user information repositories.

■ TECHNICAL CHARACTERISTICS

The system consists of:

- Internal database (SQL Server, Oracle), where the application will run its internal management data
- Optionally, there is specific key protection hardware (HSM) available. Approved technologies are Thales nShield and Safenet Luna SA
- It can be complemented with 'Indra Custor' product, for easier management of user cards

- Cards (or cryptographic tokens) validated up to date for the product are: Giesecke & Devrient, microelectronics (MMAR), FNMT and Gemalto.



■ APPLICATION

PKI infrastructure for issuing and managing digital certificates, both for individuals (users) and/or devices (servers, PCs, software). Smart cards or USB tokens are also managed.

The final objective of the solution is to protect critical data and communications of the organizations, through the use of cryptography and digital certificates:

- Robust user Authentication for critical applications of the company, preventing uncontrolled access of unauthorized persons.
- Electronic signature which ensures that the information sent was not altered since the time of signing, as well as the ID of the person signing the data.
- Data encryption, which ensures information confidentiality.

■ REQUIREMENTS FOR IMPLEMENTATION

The product requires:

- Internal database (SQL Server, Oracle), where the application will run its internal management data.
- Optionally, there is specific key protection hardware (HSM) available. Approved technologies are Thales nShield and Safenet Luna SA

■ ECONOMIC BENEFITS

The economic benefits are related to the economic valuation of the information to be protected.

- Robust user Authentication for critical applications of the company, preventing uncontrolled access of unauthorized persons.
- Electronic signature which ensures that the information sent was not altered since the time of signing, as well as the ID of the person signing the data.
- Data encryption, which ensures information confidentiality

■ NON-ECONOMIC BENEFITS

Cryptography and digital certificates ensure critical data and communications

of the organizations, thus minimizing the risk of data loss.

Moreover, when personnel have an "employee card" the idea of belonging to the company is reinforced. It also provides a higher degree of security and modernity against competing companies.

■ IMPLEMENTATION EFFORT

- Basic PKI (CA Root + SW): 4 months, 3 technicians
- CA + Registration Web application: 5 months, 5 technicians
- PKI (in full): 6 months, 5 technicians

■ COST

Approx. average cost:

- HSM: €25,000 / unit
 - CA, TSA, OCSP: €25.000 / component
 - Cryptographic cards / tokens: €25 / unit
- Variable depending on capacity and compatibility needs.

■ DEADLINES

See "Implementation Effort".

■ INTERNATIONAL CREDENTIALS

European System of Central Banks (ESCB), Government of Portugal, Panama Maritime Authority, Central Bank of Morocco (Bank Al-Maghrib).

■ NATIONAL CREDENTIALS

Ministry of Interior (e-ID Card, e-Passport, National Police Force Professional Card), Ministry of Defense (Command and Control Network), Association of Registrars, Indra, Andalusian Health Service.

■ DOCUMENTATION

The following documentation is in English and Spanish. There is also a French version.

- Installation and Configuration Guide
- Maintenance Guide
- User Manual, for each workflow role

USERS:

- Any medium / large organizations:
 - Private companies: protection of internal communications (employees) and external communications (suppliers, customers and partners)
 - Public bodies: protection of internal communications (officials) and external communications (suppliers, citizens and other public bodies)

Trust and e-Signature Service Platform

■ DESCRIPTION

The solution provides a set of trust service components, accessible through Web Services, implementing electronic certificate signature, validation and "parsing" (extraction of information), signature verification, authorization management, non repudiation information management and long-term signature generation, e signature custody and refreshment, information encryption, key custody and departmental encryption, etc.

In this regard, it should be noted that the proposed platform is robust, modular and scalable, and follows the SOA (Service-Oriented Architecture) philosophy, providing services to other applications and systems of the organization through an API and some interfaces based on XML Web services and optimized for handling large documents. These interfaces are compliant with OASIS Digital Signature Services (DSS) standards, enabling to configure the data supplied by these services by using XSLT sheets.

In this way, the solution is based on a non-interference (each application implements its processes and invokes signature services as and when desired) and non-intrusive model (installation of any components or runtime in corporate applications is not needed) for business and document processes implemented by each application of the organization. This situation provides an added value for integrating existing applications, avoiding inherent risks, as installation of any component in production environments is not required.

■ TECHNICAL CHARACTERISTICS

The platform is implemented in "appliance" format, either on physical servers or VMware virtual servers (implementation and maintenance of OS, drivers, web server / applications, etc., is not required). It is also completely modular and scalable, with different configurations:

- Support for multiple authentication and access control mechanisms, providing centralized web access control (OASIS SAML).
- Full support for e-signature formats (CAES, XAdES and PDF), S/MIME messaging and WS-Security, including

archiving and long-term non-repudiation management.

- Full support for document encryption (CMS, XML-Enc) and messaging (S/MIME and WS-Security) formats, including encryption key management (EKM).

Complete set of integration architectures:

- Integration solution oriented to SOAP/XML web services with OASIS DSS protocol and REST/XML style.
- XML integration gateway for proxy-based architectures.
- Java API for integration, enabling transparent connectivity with web services.

The communications with the platform for invoking services and sending / receiving data are established by secure web services.

■ REQUIREMENTS FOR IMPLEMENTATION

- The platform is implemented in "appliance" format, either on physical servers or VMware virtual servers.
- SQL / Oracle database for storing logs (if desired)
- Connection to certificate revocation sources issued by the different Service Providers configured on the platform (typically, only Internet access is needed)
- Specific training on product configuration / administration for administrators
- Specific training on interfaces and services for corporate application developers / integrators.

■ ECONOMIC BENEFITS

- Support for eliminating paper (paperless office) and implementing electronic processes within the organization. In this way, productivity is improved by providing the level of security and trust required for different applications and electronic services, on a 24x7x365 basis
- Support for e-signature implementation and use in corporate applications enabling electronic transactions and business, thus mitigating their inherent risk.

■ NON-ECONOMIC BENEFITS

- Improved security and trust in electronic processes and transactions, by providing a set of services to ensure their authenticity, integrity, confidentiality and non-repudiation.
- For Public Administrations, it will help

them to be compliant with the Law on Citizens' Electronic Access to Public Services 11/2007 (LCEAPS), and for private organizations to be compliant with the Law for Promotion of Information Society 56/2007 (LISI).

- Speeding up times and reducing costs for management of organization's internal procedures.
- Improved corporate image (cutting-edge technology).

■ IMPLEMENTATION EFFORT

Depending on project scope, functional modules to be implemented, and integrations with other corporate information systems.

■ COST

Depending on project scope, functional modules to be implemented, and price of commercial applications licenses.

■ DEADLINES

The nucleus allows a fast implementation by deploying in "appliance" format.

■ INTERNATIONAL CREDENTIALS

- Caisse Nationale de Securite Sociale, Morocco
- Caixa Andorrana de Seguretat Social, (CASS), Andorra
- Central Bank of Morocco

■ NATIONAL CREDENTIALS

Spanish Parliament, Ministry of Defense, Undersecretary of Interior Ministry, Health Service of Castilla La-Mancha (SESCAM), Ministry of Agriculture, Fisheries and Food, National Institute of Statistics, Logroño City Council, several first-level banks, several companies in the utilities sector, etc.

USERS:

Strictly speaking, "users" are all corporate applications that perform and integrate operations and transactions with electronic signature: Headquarters, Information Services of State Security Forces, Regional Security Forces and local Police Forces, etc.

Portafirmas (E-Signature Folder) (AMARA Pfirma)

■ DESCRIPTION

Main features provided by the e-signature folder Portafirmas include:

- Multilanguage (Spanish, Catalan, Basque, English, French, German, etc.)
- Mass signature of documents / data by users in the organization through a Web interface.
- Support for any signature circuits, managing them for each document and allowing chain signatures (in series) and joint signatures (in parallel).
- Display of original documents to be signed, as well as more than 10 metadata fields (descriptive).
- Delivery of alerts and mails.
- Delivery of attachments (with capability to be independently signed).
- Roles:
 - Assistant / Collaborator (to review documents of the signatory, and add comments).
 - Delegate. Allowing management of delegated tasks (users search, activation / deactivation), etc.
- Support for multiple signature formats: P7/CMS/CAAdES, XAdES, PDF and PAdES.
- Any electronic certificate (Official / Employee Card, FNMT, FNMT-APE, e-ID card, FirmaProfesional, Camerfirma, ACCV, CATCert, etc.)
- Portafirmas Client Application. Independent web application for delivery of documents to be manually signed, typically by secretaries / collaborators. It allows management of documents requiring signature that are not generated by existing electronic processes
- Integration with multiple platforms of e-signature services: @firma (for Public Administrations), TrustedX (Safe-layer), ZAIN, IBKey, etc.
- Integration with Verification Code management systems, visual signature position, etc.
- Integration with Document Managers

■ TECHNICAL CHARACTERISTICS

Portafirmas is a web application developed according to Java technology standards, so it can be adapted to different J2EE environments and running settings in a simple way:

- J2EE applications servers: Apache / Tomcat, Oracle IAS, JBoss, Weblogic, WebSphere, etc.
- Databases: Oracle, Postgree, DB2, SQL Server, etc.
- LDAP servers: OpenLdap, Active Directory, etc.
- File repository, document manager.
- Web navigators: Internet Explorer, Firefox-Mozilla.



■ APPLICATION

Horizontal corporate solution for electronic signature of documents and attachments by users in the organization, centralizing all e-signatures in a single corporate application.

Support for mass actions (signature, rejection, etc.), instead of document by document.

Thanks to an interface based on web services, existing electronic processes in the organization can be easily integrated into the application.

Modular and configurable tool.

All implementation projects include:

- Necessary adjustments to be integrated into existing corporate systems (Style Guide, SSO, User Directory, Application Server, Database, etc.)
- e-Signature training and consulting
- Training and preparation of tailored manuals for easier management of user changes in the e-signature tool.

■ INTERNATIONAL CREDENTIALS

Portafirmas implementation and use, requires:

- J2EE running environment: Applications server, Database, LDAP, file repository.
- It is recommended to have a Validation Platform for Electronic Certificates and Signatures (@Firma, TrustedX, etc.).
- In order to run e signature, user must have a web browser and an electronic certificate supported by the system

■ ECONOMIC BENEFITS

Support for eliminating paper (paperless office) and implementing electronic processes.

Speeding up times and reducing costs for management of the organization's internal procedures, without requiring the physical presence of the signatory (he/she can remotely sign using a web browser).

Improved productivity by allowing mass signature of multiple documents (instead of document by document), just as a "classic" signature folder (for paper documents).

■ NON-ECONOMIC BENEFITS

- For Public Administrations, it will help them to be compliant with the Law on Citizens' Electronic Access to Public Services (LCEAPS) 11/2007, and for private organizations to be compliant with the Law for Promotion of Information Society (LISI) 56/2007
- Speeding up times and reducing costs for management of organization's internal procedures
- Improved corporate image (cutting-edge technology)
- Improved security in electronic processes and telematics transactions, ensuring the sender's authenticity and non-repudiation, and data integrity.

■ IMPLEMENTATION EFFORT

Depending on project scope, functional modules to be implemented, and integrations with other corporate information systems.

■ COST

Depending on project scope, functional modules to be implemented, and end users.

■ DEADLINES

Normally 4-8 months (depending on project scope).

■ NATIONAL CREDENTIALS

Spanish Parliament, Ministry of Territorial Policy and Public Administration (former Ministry of Public Administration), Undersecretary of Interior Ministry, Extremadura Regional Government, Govern de les Illes Balears, Logroño City Council, Alava Provincial Council, IZFE, CSN, Valladolid City Council, ADE, etc.

USERS:

All organizations currently using electronic processes and/or telematics transactions, which must electronically sign documents, thus ensuring both the integrity and non repudiation: Public Bodies, Headquarters, State Security Forces Information Services, Regional Security Forces and local Police Forces, Utilities, Private Companies, Insurance Companies, Banks, Universities, etc.

Information Security Management Tool

■ DESCRIPTION

The tool includes the following features:

- Modular: Consisting of modules providing diverse functionalities
- Customizable: Allowing adaptation to the particular needs of each client
- Integration: Enabling integration with existing tools
- Data Repository: Allowing centralization of generated documents
- Automatic database feeding: Collecting data from other systems and databases
- Workflows Management: Making workflows management easier
- Use of standards: Provided functionality is based on international standards.

The tool consists of the following modules:

- SGSI Implementation
- Risk Analysis
- Continuity Planning Management (BCP)
- LOPD Management
- Audit Management and Follow-up
- Security GAP Analysis
- Control Panel
- Security during Information Systems' Life Cycle
- Regulatory Body
- Incident Management
- Training Plans
- Vulnerability Management
- Project Management

■ TECHNICAL CHARACTERISTICS

Web application; support for web servers such as Apache and databases such as MySQL, SQL Server.

APPLICATION

This tool is aimed to serve as an effective instrument for systematization of Logic Security processes: Risk Analysis, Asset Management, Continuity Management, ISO27002 Differential Analysis, implementation of an information security management system, LOPD compliance management, audit follow-up, security management during applications' life cycle, etc.

The tool serves as a support for implementation of all these processes, and the organization security status can be monitored by using an integrated control panel.



ECONOMIC BENEFITS

The tool is free; the only costs are for adaptation, implementation, and corrective and developmental maintenance.

Compared to COTS products: Lower cost of license acquisition.

Compared to specific developments: much lower cost for adaptation to the specific needs of an organization.

NON-ECONOMIC BENEFITS

- Improved security management
- Security control panel
- Fully customizable to organization needs.

IMPLEMENTATION EFFORT

For basic version, 5 days of a Systems Technician per module.

The implementation effort required for adaptations cannot be assessed.

COST

- HW: Provided by customer. Standard server
- Basic SW: Open Source (for SQL-Server, the product would have that cost)

- SW tool license: Free
- Maintenance and adaptations: according to project.

DEADLINES

Depending on number of modules to be implemented and adaptations.

USERS:

Everyone

Citizen's Service Point

DESCRIPTION

Citizen's assistance system through IP videoconferencing. It also includes video surveillance from a nearby mast, to provide security to the user.

The control and assistance software allows remotely receiving and responding video calls, including their log and recording.

Presence detection and activation of lighting and other external elements (barriers, retractable pylons, etc.).

It is a modular system, so functionality can be extended: information displays, data capture elements, etc.

TECHNICAL CHARACTERISTICS

- Assistance kiosk: outdoors, vandal-proof. Adaptable ergonomic system for people with functional diversity (wheelchairs, children, etc.)
- Video call: using IP streaming, variable bandwidth depending on the infrastructure
- External IP video surveillance camera
- Communications: optical fiber, copper or wireless.
- Control Software: multi-user, client-server architecture, integration into assistance and dispatch platforms (iSafety)

APPLICATION

Provide citizens with a direct communication channel with State Security Forces for direct and immediate assistance.

The Citizen's Service Point also includes dedicated video surveillance, enabling to create a security space surrounding the person.

INTERNATIONAL CREDENTIALS

- Communications infrastructure
- Connection for power supply

ECONOMIC BENEFITS

Competitive advantage in costs for 24x7 assistance against personnel detachment (patrols, checking points, ...)

NON-ECONOMIC BENEFITS

- Police presence providing security to citizens
- Capability to follow-up nearby security incidents, through built-in cameras
- Optionally, it can be equipped with a query interface by data type (tourist information, location information, security, procedures, etc...)

IMPLEMENTATION EFFORT

Depending on communications availability for the Service Point.

COST

Approximately €25,000 per Service Point, including civil works and client station.

DEADLINES

Estimated 3 months from acceptance to implementation.

NATIONAL CREDENTIALS

Torrejon de Ardoz City Council (Madrid).

USERS:

Citizens in general. Pedestrians, passengers and transport users (airports, stations...), tourists...

Handgun Simulator (SAC, by its acronym in Spanish)

DESCRIPTION

SAC allows training on both marksmanship and tactical action protocols. The simulator works with real weapons that after a small and quick modification, fully reversible, change from real fire to simulation and vice versa. These weapons include recoil without external connections, wireless monitoring capability and possibility to activate malfunctions.

SAC has a simple and intuitive user interface, and includes a tool for users, exercises and courses planning and management.

The Simulator is based on COTS components, ensuring rapid adaptation to new technologies.

Among others, it consists of a surround sound system, which increases the sense of realism and allows location of objects surrounding the trainee; a rack cabinet designed for continuous use and durability, equipped with Plug&Play technology; a high precision gunshot detection system to identify shooting weapons; a next generation projection system that allows obtaining high resolution images; a recording / playback system that allows recording the exercises for further view in order to correct errors, and a hostile fire system that shoots balls to shooters to stress them and make them learn how to position and conceal themselves.

■ TECHNICAL CHARACTERISTICS

Hardware based on COTS components and software developed by Indra.

■ APPLICATION

The SAC Handgun Simulator allows training on marksmanship and tactical protocols to any armed forces in a safe, educational and affordable way.

■ INTERNATIONAL CREDENTIALS

SAC is configured according to customer needs. Depending on chosen configuration, the simulator will require a room of a specific size with a minimum of 6.5 x 8m., although typical implementations are made in rooms of over 9 x 7m. It is essential that the room can be completely isolated from sunlight, and to have 16A/220V power supply. Once installed it is necessary a 5-day user training course.

■ ECONOMIC BENEFITS

The simulator represents significant economic benefits because the use of live ammunition, targets, patches and a real shooting range is avoided, all this entailing savings (rent, gas exhauster consumption, travels to shooting range).

■ NON-ECONOMIC BENEFITS

Significantly improved quality of marksmanship training; safe tactical training, which could not be conducted without a simulator; prevention of security risks,

by not using live ammunition; prevention of health problems, by not using ammunition that produces gas emissions; training in a simple infrastructure, without the need for an indoor / outdoor shooting range; speeding up of training, as many trainees can simultaneously train; and detailed reports, avoiding the instructor to count and record the results.



■ IMPLEMENTATION EFFORT

It will be necessary a 5-day training course. After the course, instructors will have the expertise needed to properly operate the system.

■ COST

Variable depending on the configuration selected by the customer.

■ DEADLINES

Variable depending on the configuration selected by the customer.

■ NATIONAL CREDENTIALS

Madrid Municipal Police, Leon Local Police, Avila Police Academy, Valladolid Municipal Police.

■ DOCUMENTATION

Leaflet.

USERS:

Security Forces and Private Security

INDRA SIBED - Secure Document Issuance

■ DESCRIPTION

The solution consists of the following functional modules:

- Enrollment: Capture of biographic and biometric data (fingerprint, photo, signature, iris) of the applicant
- Payment of fees: Managing payments corresponding to document issuing. Several payment methods: cash, card, internet
- Authorization: Applications validation and authorization workflow
- Personalization: Secure print of the document with bearer's data
- Stock control: Detailed management of the life cycle of all security materials used in the issuance process (blank documents, security inks, etc.)
- Quality control: Verifying that the document issued contains the correct information and relevant security measures
- Delivery: Delivery to the applicant after ID verification
- Document life cycle management: Record of events during document lifespan: loss, theft, damage, renewal, expiration, data update, etc.
- ID Verification Services: Services provided to third parties to confirm the ID of document's bearer (e.g., financial institutions to verify a citizen's identity when opening a bank account).

■ TECHNICAL CHARACTERISTICS

- Software application developed on component-based J2EE architecture
- Operation in on-line mode (web application) and off-line mode
- Integration of biometric data capturing devices (fingerprint scanners, iris readers, signature digitizing tablets, digital cameras).

■ APPLICATION

Integrated solution for issuing secure documents: ID Cards, Passports, Visas, Driving Licenses, etc.

It includes issuance of electronic documents (with contact chip or contactless), documents with bearer's biometric information and travel documents according to ICAO international standards.

■ REQUIREMENTS FOR IMPLEMENTATION

Core infrastructure (Relational database, application servers, etc.), WAN and

LAN communications, capture devices (different alternatives: webcam, video or IP cameras, etc.).

The implementation includes training for installation, administration and maintenance of the system and user training.

■ ECONOMIC BENEFITS

Simplifying the document issuance process, reduction of administrative tasks.

■ NON-ECONOMIC BENEFITS

- Improved citizen identification processes, both for public purposes (immigration control, citizen security, census, etc.) and private purposes (customer identification, etc.). For electronic documents, it makes the implementation of eGovernment easier
- Increased security in identifying people.

■ IMPLEMENTATION EFFORT

Estimated number of hours and resources required for the implementation of the product, solution or service.



■ COST

Depending on the scope of each project.

The main cost drivers are:

- Number of registration / data capturing stations
- Number of documents to be issued
- Technology and materials for printing documents
- Existence of electronic document (with chip) and management of bearer's electronic ID (digital certificates, PKIs, etc.)
- System operation

■ DEADLINES

Variable according to project size. Between 12 and 14 months for implementation.

■ INTERNATIONAL CREDENTIALS

Passport of Mexico, Passport of Portugal, Passport of Angola, ID card of Portugal, ID card of Peru, Seaman's Book of Panama, Card of Morocco Armed Forces, Card of Kenya Armed Forces.

■ NATIONAL CREDENTIALS

Spanish Passport, Spanish ID Card.

■ DOCUMENTATION

User manual, installation manual and administration / operation manual.

USERS:

Governments, Population Registers, Security Forces

Priority Vehicle Simulator

■ DESCRIPTION

The simulator consists of a cabin that includes a section or representative parts of the simulated vehicle for recreation purposes. All vehicle controls (pedals, steering wheel, gear lever...) work in the same way that in the simulated vehicle.

The simulator integrates a high-resolution visual system, a motion system with six degrees of freedom and a control system for steering and braking forces.

In order to control training and evaluation of the trainee, an instruction station is provided with predefined exercises and tools to plan new exercises. The instructor has the capability to dynamically control multiple simulation parameters in real-time: weather conditions, traffic density and pedestrians, vehicle breakdowns, traffic lights phase, crosswalk, side exit of vehicles, driving a vehicle to be pursued and/or guarded... The instructor can also monitor the most representative parameters of the exercise during execution (vehicle status, speed, etc.).

At the end of the exercise, the system generates an evaluation report with the most important parameters of the exercise. The instructor station includes tools to manage evaluation files that allow keeping historical records.



■ TECHNICAL CHARACTERISTICS

HARDWARE:

- Actual components of the simulated vehicle (cabin, seats, steering wheel, pedals, dashboard, gear lever...)
- Motion system with 6 degrees of freedom capable of simulating any inertia and acceleration linked to driving
- Projection system of the simulation environment (projectors and projection screens)
- Surround Audio Systems

SOFTWARE:

- Instructor Station (IS) for simulator control and trainee evaluation
- Central Processing System
- Mathematical models (simulated vehicle and traffic)
- Application of sounds for faithful audio reproduction related to the simulation environment and the vehicle itself
- Management of input and output signals (IOS) and forces control systems (simulation of the steering column)
- Visual and image generation engine

DATA BASES:

- Visual (layout of urban and interurban roads with a total of 150km)
- Simulated vehicle model (Fire truck, Police car, etc.)
- Vehicle models for traffic
- Pedestrians
- Instructor Station (types of exercises, trained students, training evaluation)

■ APPLICATION

Tool for training and evaluation of drivers of priority vehicles (fire trucks, police cars, ambulances...) in a risk-free environment fully controlled by the instructor, engaging the trainee in a virtual environment capable of simulating any real driving situation with full fidelity.

The simulator is an essential training tool on emergency driving, improving attention and reaction time to unexpected events; training on operating procedures in chasing, escort and surveillance exercises; exercises to control the vehicle in evasive driving on any surface...

■ REQUIREMENTS FOR IMPLEMENTATION

Appropriate facility to house the simulator with controlled lighting, temperature and humidity. Pavement must be resistant for the motion system to be anchored.

■ ECONOMIC BENEFITS

- Fuel savings
- Lower maintenance costs
- Vehicle availability
- Training at any time

■ NON-ECONOMIC BENEFITS

- Reduced accidents
- Improved quality of practical training
- Improved objectivity in the selection process
- Flexibility of training process



■ IMPLEMENTATION EFFORT

- 2-week training course for instructors
- Support for giving courses during 2 weeks

■ COST

Depending entirely on program definition.

■ DEADLINES

Between 6 and 10 months, depending on program requirements.

■ NATIONAL CREDENTIALS

Madrid City Council, Galicia Regional Government.

USERS:

State, Regional and Local Security Forces.
Fire Protection. Ambulance Drivers.

Group, Encrypted and over-Public-Networks Operational Communications System

■ DESCRIPTION

All communications are carried out over encrypted VoIP systems (Voice over IP), with high-quality and advanced audio codecs and very low bandwidth.

An IMS (IP Multimedia Subsystem) Virtual Operator implements user management and authentication to manage communications and their security. The devices and technology used enable making individual calls and group calls, suitable for communications between security personnel and service personnel.

Priority user levels (10 levels) are included to provide flexible communications similarly to PMR radios, with the advantage of not requiring network deployment and the consequent savings in infrastructure.

The Virtual Operator (IMS) manages all calls. Operators are traffic carriers and the user controls the system implemented with the IMS. Remote management of security devices is also available.

Connected groups and users can be viewed through the Presence Indicator.

Mobile terminals also incorporate a GPS that allows their location in a Geographic Information System (GIS) located in the Control Center for monitoring and location of staff. Functionalities include control of routes by different operators or work teams, and their location and real-time tracking.

■ TECHNICAL CHARACTERISTICS

- Secure end-to-end communications both for individual calls and group calls
- Secure communications through HSDPA / 3G / EDGE / GPRS networks in PTT (Push To Talk) mode or Full-Duplex mode
- Secure communications in Full-Duplex mode for individual calls
- Bidirectional authentication between clients and the IMS
- AES encryption algorithm of 128 bits for symmetric encryption
- Unique session keys for each communication with IMS and each voice call
- Different high-quality audio codecs and configurable low bitrates
- IMS Virtual Operator for call management
- IM2C Security remote manager

■ APPLICATION

The PTTSec system allows for group, encrypted and PTT (similar to Tetra or Tetrapol radios) communications using any global mobile operator, over HSDPA / 3G / EDGE and GPRS wireless networks.

Communications can be made both in PTT (Push To Talk) mode, similar to Tetra or Matra security systems, and in full duplex mode (similar to a phone).

Interconnection with corporate telephony system (Unified Telephone System) allowing calls between the PTTSec system and fixed or mobile extensions.

■ INTERNATIONAL CREDENTIALS

SIM card from any operator with data connection enabled. Specific training for system users and IMS administrators.

■ ECONOMIC BENEFITS

- No network deployment, maintenance or extension of radio resources is required (all this is carried out by the mobile operator).
- Single System for Group or Individual Encrypted Communications, integrated with Unified Corporate Telephony, and GPS and Cell Location of units, visualizing them in a Command and Control Center.
- Free of charge calls between the system and corporate extensions through the Unified Telephony system

■ NON-ECONOMIC BENEFITS

- Global Coverage, with fixed, mobile and satellite networks
- Own Virtual Operator (IMS). Operators are traffic carriers and the user controls the implemented system
- Security and IM2C Remote Management
- Easy Operation: Presence indicator, multiple groups at start
- Flexible and Dynamic System.

■ IMPLEMENTATION EFFORT

Network implementation is not required. It is only necessary to install the IMS in a CPD. Estimated one working day (8h) of one person (technician).

■ COST

€2,000 / terminal.

■ DEADLINES

Immediate.

■ INTERNATIONAL CREDENTIALS

Customs Surveillance Services of other Governments.

■ NATIONAL CREDENTIALS

State Security Forces, Ministry of Interior (Civil Guard and National Police Force), Ministries of Defense (National Intelligence Center), Local Police.

USERS:

State Security Forces, Special Forces, Local Police Forces, Customs, Escorts, Ministry of Interior (National Police Force and Civil Guard), Ministry of Defense (National Intelligence Center)

VICTRIX Assault Rifle Simulator

■ DESCRIPTION

Victrix is a simulator that allows both tactical training and conventional training conducted at indoor / outdoor shooting ranges.

The system uses shooters' real weapons applying them a fully reversible modification to switch from live ammunition to simulated and vice versa. These weapons have recoil without external connections, including wireless monitoring capability, and possibility to remotely activate malfunctions.

Victrix shooting simulator allows conducting any of the usual instructional practices of the Armed Forces and Security Forces. The main training function is to individually and jointly develop operating procedures. These are carried out in realistic 3D scenarios populated by all sorts of tactical elements and intelligent characters whose behavior is controlled by an artificial intelligence and conflict management system.

The simulator is specially developed to simulate peacekeeping missions of our Armed Forces and Security Forces.

Victrix has a simple and intuitive user interface, and includes a tool for users, exercises and courses planning and management.

The simulator is based on COTS components, ensuring rapid adaptation to new technologies.

Among others, it consists of a surround sound system, which increases the sense of realism and allows location of objects

surrounding the shooter; a rack cabinet designed for continuous use and durability; a high-precision gunshot detection system to identify shooting weapons; a next generation projection system that allows obtaining high resolution images; a recording / playback system that allows recording the exercises for further view in order to correct errors, and a hostile fire device that shoots balls to shooters to stress them allowing the training on positioning tactics and concealment to enemy fire.

■ TECHNICAL CHARACTERISTICS

Hardware based on COTS components and software developed by Indra.

■ APPLICATION

The Assault Rifle Simulator is designed to assist instructors of the Armed Forces and Security Forces in marksmanship and tactical training.

■ REQUIREMENTS FOR IMPLEMENTATION

VICTRIX is configured according to customer needs. Depending on chosen configuration, the simulator will require a room of a specific size with a minimum of 7.5 x 9m, although typical installations are made in rooms of over 8 x 12m.

It is essential that the room can be completely isolated from sunlight, and to have power supply (16A / 220V). Once installed it is necessary a 5-day user training course.

■ ECONOMIC BENEFITS

The simulator represents significant economic benefits because it prevents the use of live ammunition, targets, patches and a real indoor / outdoor shooting range or tactical training villages, all this entailing savings (rent, gas exhauster consumption, travels to shooting range).

■ NON-ECONOMIC BENEFITS

Significantly improved quality of marksmanship training; safe tactical training, which could not be conducted without a simulator; prevention of security risks, by not using live ammunition; prevention of health problems, by not using ammunition that produces gas emissions; training in a simple infrastructure, without the need for an indoor / outdoor shooting range; speeding up of training, as many trainees can simultaneously train, and detailed reports, avoiding the instructor to count and record the results.



■ IMPLEMENTATION EFFORT

A 5-day training course will be necessary. After the course, instructors will have sufficient expertise to operate the system.

■ COST

Variable depending on the configuration selected by the customer.

■ DEADLINES

Variable depending on the configuration selected by the customer.

■ NATIONAL CREDENTIALS

Ministry of Defense, Army.

■ DOCUMENTATION

Leaflet.

USERS:

Armed Forces and Security Forces



NUCLEO DE COMUNICACIONES Y CONTROL, S.L.U

Avda. de la Industria, 24
28760 - Tres Cantos
Madrid
Telf. +34 807 39 99

www.nucleocc.com

Communications/Jammers Control

■ DESCRIPTION

Using the same philosophy of software-defined radio (SDR), countermeasure solutions of NUCLEO DF are based on what are called SOFTWARE DEFINED JAMMERS (SDJ), which are fully programmable devices capable of supporting combined ACTIVE and REACTIVE countermeasure modes, integrating analysis functions, classification, blocking, and radio signal interception in a single element.

Last generation SDJ jammer provide an effective solution to combat modern transmission systems (sophisticated radio controls, 3G and 4G telephony systems), both for current and future scenarios of attack and aggression.

In this sense, SDJ generates an electromagnetic signal which prevents all communications, including WLAN, WiMAX, Bluetooth, etc



■ TECHNICAL CHARACTERISTICS

SDJ jammer allows detecting, classifying and generating radio signals in several frequency ranges, through independent modules:

- From 20MHz to 500MHz
- From 500MHz to 3GHz
- From 3GHz to 6GHz

Moreover, as it incorporates programmable elements, the SDJ jammer presents different software options for DTMF, GSM, 3G, LTE signals...

Configuration and maintenance can be local or remote via an interface with graphical diagnostic capabilities of operation.

■ APPLICATION

By using attack techniques based on remote detonation of improvised explosives devices (IED), terrorist threats faced by forces and security bodies of the States are getting increasingly sophisticated, thus requiring greater flexibility and effectiveness in intelligent signal generation techniques.

Jamming is an effective technology to disrupt radio communications from mobile phones, remote control devices, desktops and radio transmitters, efficiently protecting buildings, vehicles and people of possible attacks carried out by controlled radio systems.

Conventional countermeasures (barraque jammers) based on brute force (receptor blocking and desensitization) are proven to be increasingly less effective as high-power and narrowband devices are made affordable, while third and fourth generation mobile telephony networks proliferate which are resistant to interference from scanning, white noise...

The developmental trend is aimed at providing increasingly reactive countermeasure systems so that they concentrate the available energy of amplifiers at frequencies that are active at all times (RESPONSIVE & SMART RESPONSIVE JAMMERS).

■ REQUIREMENTS FOR IMPLEMENTATION

For implementation, it is necessary to define the system's scope of action and objectives to meet, and installation conditions either on vehicle configuration or in enclosed areas.

■ ECONOMIC BENEFITS

When it comes to protection, the economic benefit is not measurable.

■ NON-ECONOMIC BENEFITS

Significant reduction in the risks associated with IED systems and it is a useful source of information as a tool of prevention and research, thanks to its capabilities of analysis, detection, classification and interception.

■ IMPLEMENTATION EFFORT

Easy implementation, both to replace existing systems and when making a new implementation in vehicles or enclosures.

■ COST

It varies depending on configuration, operating bands, type of installation, training, etc.

■ DEADLINES

Variable, depending on the application and configuration.

■ INTERNATIONAL CREDENTIALS

This new SDJ technology has not yet been implemented, but jamming systems with traditional technologies are implemented in most countries.

■ NATIONAL CREDENTIALS

TEDAX, Civil Guard, regional Police Forces and Correctional Facilities already have similar equipment with traditional technology.

USERS:

Any state or regional Police Forces, Civil Guard and Emergency Services, Correctional Facilities, Venues and VIPs

Mobile/Transportable Units

■ DESCRIPTION

These systems allow different solutions of mobile/transportable units, such as: Command and Control, Operational Coordination, Fire Protection, Citizen Protection, Air Traffic Control, Radio Communications, Command Posts, NBQ, Emergency Centers, Laboratories, Workshops, Radio-electronic Measurement, etc., and different types of applications that need to meet requirements of mobility or transportability.

■ TECHNICAL CHARACTERISTICS

As it is a “turnkey” project, technical characteristics correspond to those of the system to be integrated into the mobile or transportable system, plus the characteristics of the specific location and/or transportation item (vehicle, container, etc.).



■ APPLICATION

This solution allows having systems that can be applied to any of the defined Areas of Action, in a configuration that allows the system to be moved from one place to another (MOVILITY and TRANSPORTABILITY), while maintaining proper operation of the system.

■ REQUIREMENTS FOR IMPLEMENTATION

As these are units that can be moved from one location to another (mobility and portability), the key requirements to consider are transportation of the unit, physical characteristics of the geographic areas of implementation, and access to these areas.

■ ECONOMIC BENEFITS

Qualitative benefits: the same system with mobility and/or transportability features can be used in different applications without having to purchase more than one system.

■ NON-ECONOMIC BENEFITS

Their peculiarity of mobile usage allows them to be used, if necessary, as an advertising and promotion platform by showing logos and images of the represented organization.

■ IMPLEMENTATION EFFORT

Similar to that for a system without these special characteristics of mobility and/or transportability.

■ COST

Variable, depending on the type of system and mobility operational requirements.

■ DEADLINES

Minimum: 3 months and maximum: 12 months, after definition of the solution.

■ INTERNATIONAL CREDENTIALS:

Systems in Colombia, Afghanistan.

■ NATIONAL CREDENTIALS:

Madrid City Council, Telephone Operating Companies, Airports and Airbases, Fire Protection, Civil Protection, Autonomous Community of Madrid, Ministry of Defense.

USERS:

Any Police Forces, Civil Guard and Emergency/Civil Protection

Redat Voice Processor

■ DESCRIPTION

Software module to be applied to recordings made with the ReDat recorder. It collects recordings and works fully automatically and independently from the user. The results are stored in different databases.

■ TECHNICAL CHARACTERISTICS

- A-law or law encoding
- Sampling 8 KHz, 8-bit or 16-bit
- Files saved in .wav format
- Stereo audio files
- Support for different languages: Spanish, English, Italian, French, German, Czech, Slovak, Russian, and Polish

■ APPLICATION

The objective of ReDat Voice Processor is to provide maximum information from recordings collected, by analyzing voice and emotions, keywords, monologue detection, and other user-defined parameters. Thanks to the collaboration of the most prestigious research centers and universities in Europe, ReDat has developed a highly professional solution designed to assist in making decisions involving the good performance of a call center.

■ REQUIREMENTS FOR IMPLEMENTATION

Pre-installed ReDat Recorder.

■ ECONOMIC BENEFITS

Potential.

■ NON-ECONOMIC BENEFITS

Results are available for further use with other modules and applications integrated into the recording system, such as, CRM, CTI, SAD. It provides support for manual evaluation and simplifies the work of supervisors.

■ IMPLEMENTATION EFFORT

Subject to system scope.

■ COST

Subject to system scope.

■ DEADLINES

Subject to system scope.

■ INTERNATIONAL CREDENTIALS:

Telephone Operators (Vodafone), Emergency Centers, Security Companies.

USERS:

State Security Forces, Emergency Centers, 112 Services, Call Centers

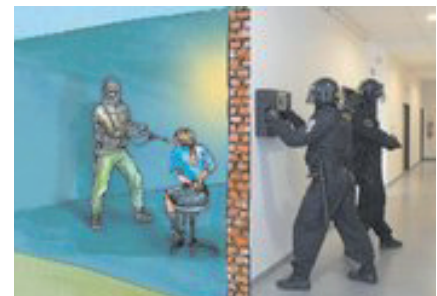
RETWIS

■ DESCRIPTION

ReTWis is the first truly portable device for risk assessment available to all public security services.

This is a new radar capable of detecting people alive behind walls of bricks and rubble.

ReTWis weighs 7kg, including battery, which provides enough power for five hours.



It can be used for different purposes; whenever you need to know if there are people on the other side of the wall and what their current location is.

ReTWis can be used in any situations where a high degree of knowledge is crucial.

ReTWis can see through such diverse materials as plaster, wood, concrete and brick, allowing users to see living beings in a range of up to 20 meters.

ReTWis is the tool that can help you get a quick assessment of the activity in the room and can also be used as a decision-making tool.

■ TECHNICAL CHARACTERISTICS

- Range up to 20 m, scalable by overlapping sub-ranges
- Intuitive user interface
- Breathing detection
- Size 50 x 42 x 16 cm
- Weight 7kg
- Battery operating time: more than 4 hours
- Data recording
- Tripod and mountable UGV
- LAN remote control

■ APPLICATION

A device that can detect people movement indoors or underground. It facilitates the work of security forces and/or rescue teams.

■ REQUIREMENTS FOR IMPLEMENTATION

Not applicable.

■ ECONOMIC BENEFITS

To be defined.

■ NON-ECONOMIC BENEFITS

- ReTWis for Armed Forces and Security Forces
- Obtaining valuable intelligence information
- Quick identification of objectives
- Best decision-making
- Detection of possible ambushes
- Facing hostile scenarios with the comfort of knowing what is behind the walls
- Improving tactical operations
- Reducing the risk to the lives of people on the other side of the wall and Security Forces
- Rescue of hostages
- Increasing the chances of mission success

- Getting precise information about the position of people and their location behind the walls
- Allowing a better vision inside a given area to save not only the lives of hostages, but also of police officers
- ReTWis for Emergency Services
- Rescuing people, saving lives
- Search and location of victims in the rubble after natural or man-induced disasters
- Quick decision-making tool
- Knowing the exact location of victims despite harsh conditions
- Exploring the ground before making decisions
- Saving time and energy in the search for survivors
- Minimizing negligence in case of emergency

■ IMPLEMENTATION EFFORT

Not applicable.

■ COST

Subject to system scope.

■ DEADLINES

Subject to system scope.

■ INTERNATIONAL CREDENTIALS:

Ministry of Defense of the Czech Republic, Ministry of Interior of the Czech Republic, Ministry of Interior of Slovenia.

USERS:

State Security Forces, Armed Forces, Emergency Teams

RD3X-NERUS

■ DESCRIPTION

Comprehensive Security System consisting of several modules: configuration and maintenance, access control, alarm management, intercom, access monitoring, accreditation management and rounds control.

■ TECHNICAL CHARACTERISTICS

Ethernet Technology. The system management and database are managed by a server which in turn manages communications with the terminals (TAI). Administrators connect to the system through consoles (H/M interface). Access and

intercom terminals (TAI) can work in stand-alone mode using the internal database that is continuously updated by the server. TAI Characteristics: ability to store 20,000 cards and 50,000 events, two readers, IP intercom, display, 3 operating modes (ON-LINE, OFF-LINE and ISOLATED). Unlimited number of installed terminals.

■ APPLICATION

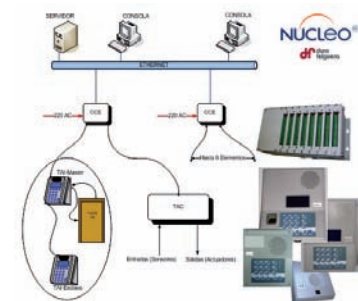
Integration of the different security systems into a single system capable of including access control, alarm control and management, vehicle access and CCTV.

■ REQUIREMENTS FOR IMPLEMENTATION

Ethernet network in the premises.

■ ECONOMIC BENEFITS

Security and access control systems are unified in a single platform, reducing maintenance, training and personnel costs.



■ NON-ECONOMIC BENEFITS

The security procedures of the facilities are optimized, as the entire system is in a single platform that can be managed by a single person.

■ IMPLEMENTATION EFFORT

Subject to system scope.

■ COST

Subject to system scope.

■ DEADLINES

Subject to system scope.

■ NATIONAL CREDENTIALS:

AENA, Defense.

USERS:

Public/private buildings and workplaces in general with more than 50 employees

Communications management systems (SCV)

■ DESCRIPTION

There are two communication management solutions, both digital. The first one, called CD30, has a matrix with time-division multiplexing (TDM), where audio and digitized resources of operators are introduced under the PCM encoding. The second one, in which there is no physical matrix since it is based on IP networks, where such audios are present, uses Real Time Protocols (RTP), and the signal can be H323 or SIP.

Both solutions are aimed at the use of communication resources on computer terminals by operators, where other management applications can be run.

■ TECHNICAL CHARACTERISTICS

- CD30: SCV based on TDMA matrix with PCM access and possibility of forming 1+1 matrices for critical operations centers. Management of VHF, UHF, HF radio. In telephony, FXS, FXO, R2, N5 lines
- ARGOS: VoIP-based SCV with H323 signaling. There are gateways to interface with VHF, UHF and HF radios. Telephony requires the use of PBX with VoIP H323
- CD40: VoIP-based SCV with SIP signaling and gateways that can have 1+1 redundancy. Management of VHF, UHF and HF radios. In telephony, FXS, FXO, R2, N5 lines

■ APPLICATION

It provides the operator with radio and telephony communications resources on a computer, whether portable or desktop, in a mobile or stationary operations center.

■ REQUIREMENTS FOR IMPLEMENTATION

CD30 and CD40 can be connected to existing PBX.

ARGOS requires a VoIP PBX system that can be supplied by NUCLEO DF.

ARGOS and CD40 adapt to existing IP networks, only requiring a bandwidth of 80Kbps for simultaneous conversation.

■ NON-ECONOMIC BENEFITS

Especially in VoIP SCV, accessibility to communications resources from any computer terminal with IP connectivity to the system network.



■ IMPLEMENTATION EFFORT

Variable, depending on the needs.

■ COST

Subject to system scope.

■ DEADLINES

Minimum 4 months and maximum 6 months, after definition of the solution.

■ INTERNATIONAL CREDENTIALS:

Systems in Namibia, ASECNA (several French-speaking African countries).

■ NATIONAL CREDENTIALS:

90% of National Airports and Airbases, as well as Command and Control centers.

USERS:

Any Police Forces, Civil Guard and Emergency/Civil Protection

Communications management systems (Tetra Gateway)

■ DESCRIPTION

It is a gateway that currently allows the interoperability of TETRA networks from different manufacturers, by connecting terminals of these networks to the gateway.

■ TECHNICAL CHARACTERISTICS

Gateway capable of interconnecting 4 TETRA networks through 6-wire terminals (TX, RX) managing sessions through their PEI port.

Cross connections are configured from a terminal associated with the gateway.

■ APPLICATION

Connecting TETRA and TETRAPOL networks.

■ REQUIREMENTS FOR IMPLEMENTATION

TETRA or TETRAPOL terminals with PEI interface and DE, TX and RX audio output.

■ NON-ECONOMIC BENEFITS

Providing access to emergency management bodies that may have incompatible networks.

As it is a portable solution, it allows cross connections at the emergency location.

■ IMPLEMENTATION EFFORT

Variable, depending on the needs..

■ DEADLINES

3 months.

■ NATIONAL CREDENTIALS

Systems at the Madrid airport (Barajas).

USERS:

Any Police Forces, Civil Guard and Emergency/Civil Protection

UAV- FULMAR

■ DESCRIPTION

FULMAR vehicles are unmanned aerial vehicles able to land on a ground skid (FULMAR) or on a pneumatic sea skid (FULMAR MAR). These vehicles are operated and marketed by a spinoff of TECNALIA: Aerovision. FULMAR is the only fully operational vehicle with national technology for surveillance and reconnaissance missions.



■ TECHNICAL CHARACTERISTICS

Low-altitude and long-lasting unmanned aerial vehicle; flying wing model of 3x2m, weight 25kg, equipped with video cameras and IR, autonomous navigation, light structure of fiberglass/kevlar and carbon fiber, autonomy of 12h, speed of up to 90km/h, payload of 5-7kg.

■ APPLICATION

UAV for coastal, perimeter and border surveillance, fire detection, anti-radar systems, critical infrastructure monitoring, piracy.

■ REQUIREMENTS FOR IMPLEMENTATION

Operational tactical vehicle with easy deployment.

■ ECONOMIC BENEFITS

System based on 2 UAVs and deployment ramps; very competitive cost.

■ NON-ECONOMIC BENEFITS

Easy handling, easy deployment, great autonomy, capacity of landing on the sea, high customization.

■ IMPLEMENTATION EFFORT

Fully operational platform.

■ COST

To be defined with customer.

■ DEADLINES

To be defined with customer.

■ INTERNATIONAL CREDENTIALS

Activities with MoDs in several countries, operational deployments in Malaysia, other.

■ NATIONAL CREDENTIALS

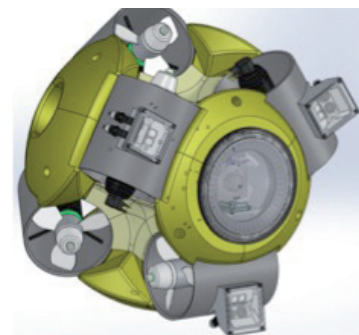
Exhibitions and demonstration flights with different MoD agents, MIR, and ATLANTIDA, SISCOIN, PROMETEO and SINTONIA projects.

■ DOCUMENTATION

Product sheets.

USERS:

UME, Army, Navy, Fire Protection, Civil Security



■ APPLICATION

Underwater ROV platform for inspection and monitoring operations (mine detection, surveillance of port areas, military areas and critical civil infrastructures, underwater emergencies...).

■ REQUIREMENTS FOR IMPLEMENTATION

Surface vehicle with deployment system, ROV collecting and securing, and checking post for the pilot managing the ROV.

■ ECONOMIC BENEFITS

Small system with a minimum number of navigation sensors, resulting in low manufacturing costs and a minimal deployment infrastructure.

■ NON-ECONOMIC BENEFITS

- Small size (miniROV), capable of entering into areas of difficult access
- Easy handling: improved maneuverability (more intuitive and accurate) by incorporating a joint-control system that allows an inexperienced pilot to handle the ROV smoothly
- Improved quality of images received by the pilot through enhancement and super-resolution techniques
- Modularity and scalability: prepared to incorporate other sensors (water quality, sonar...)
- Easy deployment

■ IMPLEMENTATION EFFORT

Project under development.

RAMSES

■ DESCRIPTION

Remotely operated vehicle (ROV) to conduct underwater inspections in shallow waters.

■ TECHNICAL CHARACTERISTICS

- Maximum performance depth of the ROV: 50m, length of umbilical cord 75m
- Maximum speed of ocean current: 2 knots
- Degrees of freedom of motion control: 6
- Power supply through umbilical cord
- Maximum operating speed: 1 knot
- Isotropic movement: ability to move with equal force in all directions
- Equipped with camera and lighting system. Ability to focus vision: from 0.3 m

- **COST**
To be defined with customer.
- **DEADLINES**
To be defined with customer.

USERS:

Navy, maritime rescue, port managers/authorities, operators of critical civil infrastructures with submerged structures...

REFORKIT

- **DESCRIPTION**
Structural armor kit for vehicle platforms based on kevlar-dyneema and C4B ceramics multilayer for armored police vehicles.
Certified for 5, 10, 15kg of Titadine. Ertzaina
- **TECHNICAL CHARACTERISTICS**
Structural reinforcement for police vehicles with specific design and material in doors and trunk.
- **APPLICATION**
Highly-efficient and low-weighted armors for police vehicles.
- **REQUIREMENTS FOR IMPLEMENTATION**
Available for Passat vehicles, adaptable to other vehicles.
- **NON-ECONOMIC BENEFITS**
 - Allows integration without altering vehicle's monitoring
 - Lightweight
- **IMPLEMENTATION EFFORT**
Available.



- **COST**
To be confirmed.
- **DEADLINES**
6 months.
- **INTERNATIONAL CREDENTIALS**
Ertzaina police vehicles.
- **DOCUMENTATION**
Pictures.

USERS:

Police vehicles

BIOBOY

- **APPLICATION**
Pollution control buoy.



SIPAI

- **DESCRIPTION**
By using this simulator, countless exercises can be emulated by varying the most common parameters of any firing exercise, such as: target distances, number of shots, time limits, lighting conditions...
Similarly, several types of silhouettes and targets can be selected, as well as their visibility over time.
- **APPLICATION**
The main objective of the Aiming Simulator for Individual Firearms (SIPAI, by its acronym in Spanish) is to train personnel

in the area of shooting basic instruction, allowing training on firing lines.

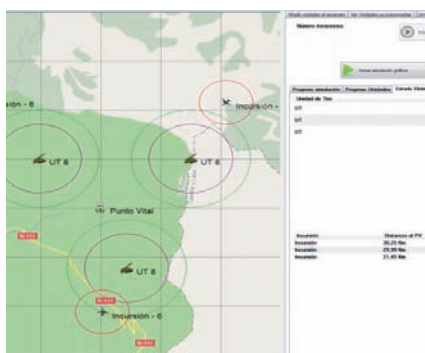
- **REQUIREMENTS FOR IMPLEMENTATION**
It can be used with any type of firearms without modifications. Thanks to its design, the sensing system can be mounted on a large range of models, both rifles and pistols. A device per instructor; touchscreen is recommended. A device per shooter.



- **ECONOMIC BENEFITS**
Low-cost simulator.
- **NON-ECONOMIC BENEFITS**
 - Valid for any type of firearm
 - No modifications needed to the firearm
 - Easy handling and installation
 - Allows training in confined spaces (≈2 sq.m. per shooting post)
- **IMPLEMENTATION EFFORT**
Fully operational platform.

HADA

- **DESCRIPTION**
HADA is an Analysis Tool for Anti-Aircraft Deployments. Its graphical interface allows configuring a simulation scenario including the elements needed to analyze any deployment (vital point, shooting units, enemy raids...).
Obstacles to reduce the visibility of shooting units can also be added. Configurability is very high, enabling to modify the characteristics of each element.
Once the scenario is established, HADA allows simulating an aerial combat obtaining as a result the number of aircraft that reach the vital point. In addition, it allows analyzing the sequence of actions carried out by each of the components involved.



■ TECHNICAL CHARACTERISTICS

Development of a prototype that can be integrated into existing Command and Control systems.

■ APPLICATION

It is an analyzer that can locate and configure an anti-aircraft deployment, in order to assess its ability to neutralize enemy raids.

■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ ECONOMIC BENEFITS

Low-cost tool.

■ NON-ECONOMIC BENEFITS

Easy handling. Adaptability according to customer needs.

■ IMPLEMENTATION EFFORT

Fully operational platform.

REVIDES

■ DESCRIPTION

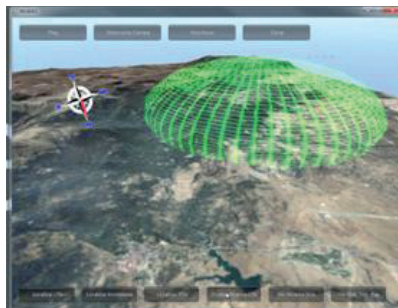
Most simulation systems require a prior preparation of the three-dimensional terrain models to be presented. This peculiarity makes sharing them with other simulation systems very expensive or almost impossible. With REVIDES project (Virtual Recognition of Deployments), it is intended to make an "on the fly" modeling of the terrain, i.e., to create and represent the terrain model in real time based on standard altimetry and texture data. This new approach allows reusing the virtual environment in any simulation system.

■ TECHNICAL CHARACTERISTICS

Development of a prototype that can be integrated into existing Command and Control systems.

■ APPLICATION

Interactive rendering tool for 3D synthetic environments. It can also be a complementary tool to the HADA evaluation system for anti-aircraft deployments.



■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ ECONOMIC BENEFITS

Low-cost tool.

■ NON-ECONOMIC BENEFITS

Prior preparation of three-dimensional models is not needed.

■ IMPLEMENTATION EFFORT

Fully operational platform.

SIMER

■ DESCRIPTION

The objective of SIMER is to simulate critical situations and get the best guidelines to mitigate accidents or unwanted events. The Emergency Simulator is a tool that helps in planning strategies for the deployment of medicalized units in a crisis.

Allows the configuration of an initial map by the user and randomly inserts notices on screen or through a mobile phone

■ TECHNICAL CHARACTERISTICS

Development of a prototype for emergency management able to establish communications via mobile terminals.

■ APPLICATION

It is a decision-making support tool or training system for decision-making personnel at emergency services.

■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ ECONOMIC BENEFITS

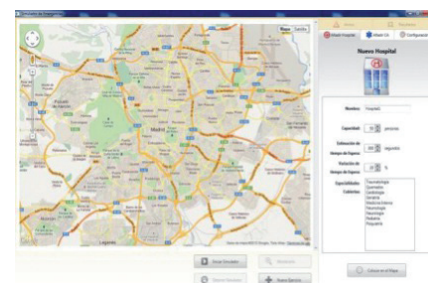
Low-cost tool.

■ NON-ECONOMIC BENEFITS

- Improves the strategic capability to deploy units in an emergency through evolution of scenarios
- Decision-making support tool that suggests specific solution strategies to the user

■ IMPLEMENTATION EFFORT

Fully operational platform.



Pattern Recognition and Trace Management

■ DESCRIPTION

The pattern recognition and trace management process standardizes information obtained from heterogeneous sensors. According to the JDL, it is divided into five levels: L0 collects the information from data sources and sends it untreated to L1, which is responsible for spatially and temporally aligning, merging and recognizing the information received. In L2, the information received from L1 is grouped; L3 predicts data behavior and perform trend analysis. Finally, L4 performs an optimization of previous levels.

■ TECHNICAL CHARACTERISTICS

Development of a system that can be integrated into existing Command and Control systems.

■ APPLICATION

It is a decision-making support tool for its field of application.

■ REQUIREMENTS FOR IMPLEMENTATION

Depending on the field of application, software and/or hardware requirements.

■ NON-ECONOMIC BENEFITS

- Analysis of large volumes of data in short time
- Knowledge from heterogeneous data
- Decision-making support tool.

ASG

■ DESCRIPTION

ASG stands for Automatic Service Generator, which provides a simple way to configure web services for information exchange between incompatible systems.

■ TECHNICAL CHARACTERISTICS

- Information exchange through dynamically generated XML documents
- Interconnection of databases of different formats
- Publication and subscription services for notification of actions between systems

■ APPLICATION

This tool can be used to exchange information between systems that, a priori, are not compatible.

■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ NON-ECONOMIC BENEFITS

- Interconnection of non-compatible systems
- All settings of communication services, either for interconnection of databases or information exchange through XML documents, are simply and intuitively established without the need of a programmer.

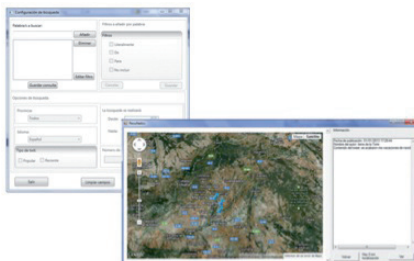
■ IMPLEMENTATION EFFORT

- Fully operational platform.
- Need for a network connection

Web Snooping

■ DESCRIPTION

Web Snooping is a social network analyzer based on Twitter, which enables an exhaustive analysis of the information associated with a particular tweet or user. This allows analyzing factors, such as a user location and his network of followers and subscribers, based on a tweet.



■ APPLICATION

It is a search tool for security purposes.

■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ NON-ECONOMIC BENEFITS

- Different search options: types of tweet, tweet location, language and date
- Filters can be applied to search keywords, to make queries including/excluding certain words, or to find tweets posted by a certain person or addressed to a certain person.

■ IMPLEMENTATION EFFORT

Fully operational platform.

AEXI

■ DESCRIPTION

AEXI stands for Fire Fighting Analyzer (by its acronym in Spanish). It is a tool that assesses the probability of extinguishing a fire, by analyzing the variables affecting its spread, the placement of units and land resources.

It also allows obtaining the estimated total time for fire extinction and, in case of affecting populations, the available time for evacuation.



■ APPLICATION

It is a decision-making support tool for planning firefighting strategies.

■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ NON-ECONOMIC BENEFITS

- Improved strategic deployment capability of firefighting units
- By analyzing the fire according to a previous layout of the terrain, it provides information about the optimal placement of firewalls, water reserves or forest roads to allow the access of units
- Allows knowing the populations at risk to warn them in advance in case of a fire
- A prototype of Tsunami Analyzer with similar characteristics is under development

■ IMPLEMENTATION EFFORT

Fully operational platform.

ANCONTRA

■ DESCRIPTION

ANCONTRA stands for Traffic Congestion Analyzer (by its acronym in Spanish).

The system aims to assess the efficiency in vehicle evacuation at different crossings or roundabouts in a specific area.

It allows graphically emulating each configured situation, before making a work on a road or altering behavior patterns of traffic lights.

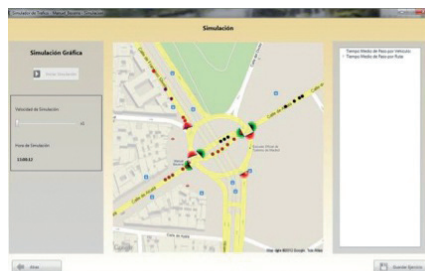
■ TECHNICAL CHARACTERISTICS

ANCONTRA stands for Traffic Congestion Analyzer. The system aims to assess the efficiency in vehicle evacuation at different crossings or roundabouts in a specific area.

It allows graphically emulating each configured situation, before making a work on a road or altering behavior patterns of traffic lights.

■ APPLICATION

It is a decision-making support tool for the design or modification of new road crossings or roundabouts.



■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ NON-ECONOMIC BENEFITS

- Provides real-time graphic simulation
- Gets the average passage times by vehicle and by route
- Selection of any area on a map and loading of preconfigured scenarios

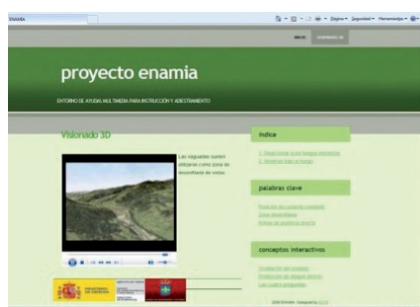
■ IMPLEMENTATION EFFORT

Fully operational platform.

ENAMIA

■ DESCRIPTION

ENAMIA stands for Multimedia Aid Environment for Instruction and Training (by its acronym in Spanish). It aims to provide a technological platform that can be used by the instructor as a standardized teaching guide and simultaneously consulted by students to enhance their knowledge.



■ TECHNICAL CHARACTERISTICS

Learning Management System (LMS) platform. Contents can be easily added by the instructor, without needing computer expertise. The course can be sequentially run or adapted to the teaching of the instructor.

■ APPLICATION

It is a technological platform that can be used by the instructor as a standardized teaching guide and simultaneously consulted by students to enhance their knowledge.

■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ NON-ECONOMIC BENEFITS

- Easy integration of contents without the need of prior specialization by the instructor
- Easy online/offline access by students, depending on time availability
- It is an evaluation aid system, as it provides the instructor with feedback on progress of student learning

GEA

■ DESCRIPTION

GEA is a mobile warning device that is carried at the waist which, in addition to allowing the user to be permanently connected and reachable, includes a set of intelligent alarms. Key features include: A-GPS geo-location, GSM/GPRS voice and data communications, hands-free automatic operation, panic button for manual alarm, and automatic fall detection through a patented algorithm.



■ TECHNICAL CHARACTERISTICS

Main technical features included in GEA are:

1. COMMUNICATIONS:

- Quad-band GSM/GPRS module
- Automatic response to incoming calls
- Hands-free system
- Alarm messages via SMS or GPRS
- Remote configuration via SMS or GPRS
- Remote status check and restart
- Automatic remote firmware update

2. POSITIONING:

- GPS tracking
- Includes position in each alarm message
- Location and tracking sent with http via GPRS every 5 minutes
- Secure definition of the area

3. ALARMS:

- Automatic fall detection
- Detecting if wearing / not wearing the device
- User outside the secure area
- Low battery
- Panic button pressed

4. USER INTERFACE:

- One button for easy use
- Improved visibility with LED
- Small size and lightweight

5. BATERÍA:

- Autonomy >24 h
- Recharging the battery takes less than 2 hours

■ APPLICATION

GEA is used to control and help protect workers who have to perform their tasks alone or who need to deal with certain types of risks because of the tasks performed (work in dangerous places, handling and transportation of large sums of money, etc.).

■ REQUIREMENTS FOR IMPLEMENTATION

None.

■ NON-ECONOMIC BENEFITS

Ability to monitor the safety and location of workers (thus indirectly tracking their productivity). Compliance with legislation concerning the Duty of Care by the employer, if applicable.

■ IMPLEMENTATION EFFORT

Simplicity. It is only necessary to decide who (call center, director, emergency services, etc.) will receive alerts from the device in use.

■ COST

€ 150 / device.

■ DEADLINES

6 months.

■ INTERNATIONAL CREDENTIALS

None. (Still a prototype, although in advanced end-user testing phase. CE certification will be obtained when tests are completed).

■ NATIONAL CREDENTIALS

See above.

USERS:

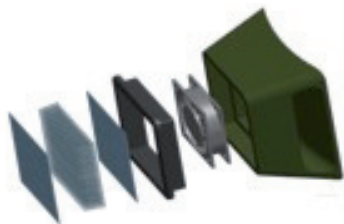
Transport workers (usually work alone); maintenance and cleaning workers (also often work alone or in hazardous circumstances)

BIODOSIMETRO

■ DESCRIPTION

The device is a compact and portable system based on the following technologies, depending on the format:

- Polymeric nanofibers, functionalized or developed based on electrostatic material in the case of the dosimeter for collecting biological threats
- Carbon nanofibers for manufacturing filters for respiratory protective equipment
- Luminescent nanofibers for identification of biological threats or gaseous chemicals when the device carries out sensing or Dosimeter functions



■ TECHNICAL CHARACTERISTICS

- Nanofibers meshes developed by electrospinning as a mean of collection of viruses, bacteria, spores, nanoparticles
- Nanomesh doping with luminescent materials to increase sensitivity to biological or chemical threats
- PAN nanomeshes for protection against hazardous gaseous substances
- High efficiency
- Low air pressure drop
- Can be integrated into existing personal protective systems and cartridges
- Adaptation to specific biological threats
- Nanofibers of electrostatic material to capture bacteria or particles

■ APPLICATION

Prot-BC is a protection system against biological threats or gaseous chemicals. The device can be manufactured in three formats:

- Dosimeter to capture the biological threat which the combatant has been exposed to
- Filter for mask cartridges of the respiratory protection equipment
- Dosimeter & Sensor for early warning of biological threats or gaseous chemicals

■ REQUIREMENTS FOR IMPLEMENTATION

Easy to integrate into existing protection equipment.

■ ECONOMIC BENEFITS

Highly competitive price for a high value-added system.

■ NON-ECONOMIC BENEFITS

- Manageable
- Efficient
- Easy to integrate in current equipment
- Versatile
- Functional

■ INTERNATIONAL CREDENTIALS

Activity with German and French companies in the security sector.

■ NATIONAL CREDENTIALS

Cooperation with the Spanish Ministry of Defense.

USERS:

TEDAX, military teams, emergency teams, personal protection teams

CERPRO Armored Protections

■ DESCRIPTION

Ceramic materials of boron carbide for personal protection / armors.

Development and manufacture of lightweight ceramic elements in different B4C materials with extreme hardness, for application in ballistic protection systems using an economical, versatile and highly-productive production process based on (1) specific formulations and (2) an adapted unpressured sintering process.



■ APPLICATION

Personal protective systems and platform protection.

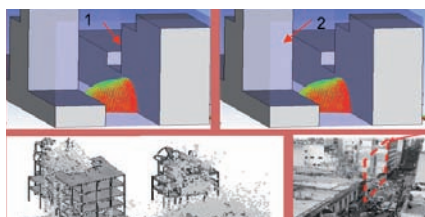
MAPEX

■ DESCRIPTION

Design solutions for critical infrastructures. Advanced numerical models of explosive behavior threats in critical scenarios. These solutions allow designing and planning the location of critical infrastructure in urban centers and hostile territories in case of explosions.

■ TECHNICAL CHARACTERISTICS

- Modeling with proprietary tools. Design, verification and optimization of structural reinforcement solutions
- Design of perimeter protection systems
- Detection and optimization of vulnerabilities in complex scenarios



■ APPLICATION

Blast-resilient infrastructures.

■ REQUIREMENTS FOR IMPLEMENTATION

According to customer/user specifications.

■ NON-ECONOMIC BENEFITS

Reduction of infrastructure risk.

■ IMPLEMENTATION EFFORT

Available.

■ COST

According to specification.

■ DEADLINES

Tbd.

■ INTERNATIONAL CREDENTIALS

European Security Programs such as SECURTRANS, SECURSTATION.

■ NATIONAL CREDENTIALS

Barajas Airport Terminal; post-explosion study.

USERS:

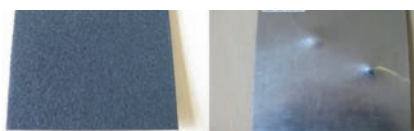
Critical infrastructures

REFORPAN

■ DESCRIPTION

Protective barriers designed and tested by Tecnalia that allow protection of people, workers, security services, and surveillance of the secondary fragmentation occurring after an explosion which is responsible for the largest number of fatalities and injuries in such attacks.

These panels are easy to deploy and replace, and also may have a protective function of the equipment or sensitive areas, such as the location of energy or communication systems.



ALUMINIUM PANEL & POLYUREA
After Impact at 450 km/h

■ TECHNICAL CHARACTERISTICS

Design and manufacture of lightweight protective barriers for protection against secondary fragmentation in case of explosion.

These solutions are based on:

- Mixture of polymeric material with metal layers
- Composite structures based on polymers reinforced with aramid fibers

■ APPLICATION

Portable protection systems to protect people or workers, security forces or surveillance services in open access points where prior scrutiny has not been performed and there is a massive influx of people. Protection of infrastructures and accesses.

■ REQUIREMENTS FOR IMPLEMENTATION

N/A.

■ ECONOMIC BENEFITS

Low cost.

■ NON-ECONOMIC BENEFITS

Increase in citizen perception of safety.

■ IMPLEMENTATION EFFORT

N/A.

■ COST

Low cost.

■ INTERNATIONAL CREDENTIALS

Cooperation with British partners.

■ NATIONAL CREDENTIALS

Cooperation with Isdefe.

USERS:

Airports, trains, sports stadiums, museums, embassies, events involving control of people in open spaces. Open check points

Evacuation systems

■ DESCRIPTION

This simulator is intended to show how long it would take to evacuate a building. It is also a useful tool in the prior steps of a building, facility or site construction for correctly design emergency exits.



■ TECHNICAL CHARACTERISTICS

Using 3D scenarios.

■ APPLICATION

It is a decision-making support tool for planning and design of emergency exits.

■ REQUIREMENTS FOR IMPLEMENTATION

Software requirements.

■ NON-ECONOMIC BENEFITS

- Intuitive interface, with capability to graphically render the evacuation evolution
- Checking if emergency exits design is right for a given facility through simulation
- Two modes of operation: Simulation and Training

■ IMPLEMENTATION EFFORT

Fully operational platform.

WBNG Frequency Inhibitor - Portable Wideband Noise Generator

■ DESCRIPTION

WBNG is a high-power, wideband, portable noise generator for mobile GSM, DCS and UMTS bands, from 900MHz to 2.12GHz. It can simultaneously work in the three bands. The signal is concentrated in a cone with an angle of 75°, with output between 25w and 35w, depending on the operational frequency.

■ TECHNICAL CHARACTERISTICS

WBNG can be mounted in a portable case weighting about 25kg, including battery and all the components needed for operation. The standard battery enables up to 3 hours of continuous work at full power of 85 w.

It can also be connected to the network via a special adapter which is supplied. WBNG shows good linearity and does not cause interference outside mobile bands.

■ APPLICATION

Frequency inhibitor for protection in security zones.

■ REQUIREMENTS FOR IMPLEMENTATION

The functional product can be purchased.

■ ECONOMIC BENEFITS

Low cost.



■ NON-ECONOMIC BENEFITS

Easy implementation.

■ IMPLEMENTATION EFFORT

None.

■ COST

To be defined with customer.

■ DEADLINES

To be confirmed.

■ NATIONAL CREDENTIALS

Used by Ertzaina.

■ DOCUMENTATION

Picture.

USERS:

Infrastructures, Police



UTI

Avda. de Aragón, 330 (entrada por C/ Campezo, 1)
P.E Las Mercedes - Edif. 5 planta 4
28022 - Madrid
Telf. 91 312 52 00 / 91 312 26 77

www.go2uti.com

Air and Sea Traffic and International Land Transport

■ DESCRIPTION

- Air and sea transport of material for any scope of action
- Possibility of shipments to/from anywhere in the world through a network of 590 offices in 138 countries
- Ability to work with Defense materials, classified materials and other materials

■ APPLICATION

Delivering of products in the right place at the agreed time.

■ ECONOMIC BENEFITS

Minimizing costs thanks to a good service performance.

■ NON-ECONOMIC BENEFITS

Customer satisfaction.

■ COST

According to service.

■ DEADLINES

According to service.



■ INTERNATIONAL CREDENTIALS

Scencma, Boeing, Elbit, Rafael, GD, Ministries of Defense of Portugal, Germany, Chile, Turkey, Poland...

■ NATIONAL CREDENTIALS

Indra, Sener, ITP, Ministry of Defense, CCGG, TecnoBit, GD SBS, EADS Casa.

USERS:

Private companies or public bodies responsible for movement of materials

Customs and Foreign Trade

■ DESCRIPTION

- Management of the various customs regimes
- Public and private customs warehouses
- Proprietary computer applications approved by the AEAT (Spanish agency for tax administration) for management of private warehouses, ADT, DDA or customs direct debit
- Counseling on tariff and tax exemptions
- Application for licenses
- Consulting
- AEAT Authorized Economic Operator (AEO)

■ APPLICATION

Correct management of customs formalities associated with the movement and storage of materials.

■ ECONOMIC BENEFITS

Minimizing costs thanks to a good service performance.

■ NON-ECONOMIC BENEFITS

Customer satisfaction.

■ COST

According to service.

■ DEADLINES

According to service.



■ INTERNATIONAL CREDENTIALS

Scencma, Boeing, Elbit, Rafael, GD, Ministries of Defense of Portugal, Germany, Chile, Turkey, Poland...

■ NATIONAL CREDENTIALS

Indra, Sener, ITP, Ministry of Defense, TecnoBit, GDSBS.

USERS:

Private companies or public bodies responsible for movement of materials

Information Systems

■ DESCRIPTION

- Management of supply chain, international transportation and purchasing in military cooperatives
- Dashboard and analysis system combining economic and logistical information. Visibility and help to decision making. Demand planning
- System maintenance
- Single database

■ APPLICATION

- Providing tools that help in the logistics and economic management for decision making
- Outsourcing of maintenance service of computer management tools

■ ECONOMIC BENEFITS

Minimizing costs thanks to good service performance and extensive information knowledge.



■ NON-ECONOMIC BENEFITS

Customer satisfaction.

■ IMPLEMENTATION EFFORT

According to service.

■ COST

According to service.

■ DEADLINES

According to service.

■ INTERNATIONAL CREDENTIALS

Scncma, Boeing, Elbit, Rafael, GD, Ministries of Defense of Portugal, Germany, Chile, Turkey, Poland...

■ NATIONAL CREDENTIALS

Indra, Sener, ITP, Ministry of Defense (SILO, Vinculo, SIGEA, SENECA, GENESIS...).

USERS:

Private companies or public bodies

Value Added Logistics

■ DESCRIPTION

- Storage and distribution
- Engineering and logistics consulting
- Supply management
- Maintenance and repair
- Packaging design

■ APPLICATION

- Design of supply chain by optimizing logistical and information flows
- Obtaining savings through proper logistical reorganization
- Obtaining benefits inherent to outsourcing the logistics of the warehousing and distribution function and other value-added activities, such as maintenance and repair activities, packaging design or cataloging.

■ ECONOMIC BENEFITS

- Obtaining savings through process re-engineering and logistics optimization
- Minimizing costs thanks to a good service performance
- Benefits inherent to logistics outsourcing



■ NON-ECONOMIC BENEFITS

- Higher quality in logistics processes
- Reducing time

■ IMPLEMENTATION EFFORT

According to service.

■ COST

According to service.

■ DEADLINES

According to service.

■ INTERNATIONAL CREDENTIALS

Ministries of Defense of Portugal, Germany, Chile, Turkey, Poland...

■ NATIONAL CREDENTIALS

Indra, Ministry of Defense, EADS, Navantia, Alcatel - Lucent.

USERS:

Private companies or public bodies responsible for logistics management of their materials

Special Operations and Services

■ DESCRIPTION

- Air and sea charters
- Museum and industrial movers
- Oversized transport
- Transport of dangerous goods
- Dedicated transport
- Transport of sensitive material

■ APPLICATION

Delivery of each product in the right place at the agreed time, considering its particular characteristics (ADR, oversize...).

■ ECONOMIC BENEFITS

- Minimizing costs thanks to a good service performance
- Reducing transport costs

■ NON-ECONOMIC BENEFITS

- Customer satisfaction
- Reducing time

■ IMPLEMENTATION EFFORT

According to service.

■ COST

According to service.

■ DEADLINES

According to service.



■ INTERNATIONAL CREDENTIALS

Scncma, Boeing, Elbit, Rafael, General Dynamics, Ministries of Defense of Portugal, Germany, Chile, Turkey, Poland...

■ NATIONAL CREDENTIALS

Indra, Sener, ITP, Ministry of Defense.

USERS:

Private companies or public bodies responsible for transport



**Asociación Española de Empresas Tecnológicas
de Defensa, Aeronáutica y Espacio**

C/ Monte Esquinza, 30 - 6º izq.
28010 Madrid - Tel. 91 702 18 10
info@tedae.org



www.tedae.org